```
{
 "nbformat": 4,
 "nbformat_minor": 0,
 "metadata": {
  "colab": {
   "provenance": [],
   "collapsed_sections": []
  },
  "kernelspec": {
   "name": "python3",
   "display_name": "Python 3"
  },
  "language_info": {
   "name": "python"
  }
 },
 "cells": [
  {
   "cell_type": "markdown",
   "source": [
    "\n",
    "TEAM DETAILS\n",
    "\n",
    "\n",
    "1.  R.Parimala\n",
    "1.  K.Kaviya\n",
    "2.  M.J.Nushrath fathima\n",
    "2.  J.Arshya\n",
    "“3.V.Divya\n”,
    “4.R.Venmathi\n,
    "\n",
    "\n"
   ],
   "metadata": {
    "id": "54xfU-B_Ujcn"
   }
  },
  {
   "cell_type": "markdown",
   "source": [
    "1.Loading Dataset into tool"
   ],
   "metadata": {
    "id": "G-JKl2xlJ08s"
   }
  },
  {
   "cell_type": "code",
   "execution_count": 1,
   "metadata": {
    "colab": {
     "base_uri": "https://localhost:8080/",
     "height": 73
    },
    "id": "W2Vz2nV6JNkx",
    "outputId": "22d51a1a-437f-41ea-f391-04c2c9f51a3b"
   },
```

```
    "outputs": [
     {
      "output_type": "display_data",
      "data": {
       "text/plain": [
        "<IPython.core.display.HTML object>"
       ],
       "text/html": [
        "\n",
        "     <input type=\"file\" id=\"files-eba0e021-c2ae-4166-8b17-d0158c0cefbe\"
name=\"files[]\" multiple disabled\n",
        "       style=\"border:none\" />\n",
        "     <output id=\"result-eba0e021-c2ae-4166-8b17-d0158c0cefbe\">\n",
        "      Upload widget is only available when the cell has been executed in the\n",
        "      current browser session. Please rerun this cell to enable.\n",
        "      </output>\n",
        "      <script>// Copyright 2017 Google LLC\n",
        "//\n",
        "// Licensed under the Apache License, Version 2.0 (the \"License\");\n",
        "// you may not use this file except in compliance with the License.\n",
        "// You may obtain a copy of the License at\n",
        "//\n",
        "//      http://www.apache.org/licenses/LICENSE-2.0\n",
        "//\n",
        "// Unless required by applicable law or agreed to in writing, software\n",
        "// distributed under the License is distributed on an \"AS IS\" BASIS,\n",
        "// WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.\n",
        "// See the License for the specific language governing permissions and\n",
        "// limitations under the License.\n",
        "\n",
        "/**\n",
        " * @fileoverview Helpers for google.colab Python module.\n",
        " */\n",
        "(function(scope) {\n",
        "function span(text, styleAttributes = {}) {\n",
        "  const element = document.createElement('span');\n",
        "  element.textContent = text;\n",
        "  for (const key of Object.keys(styleAttributes)) {\n",
        "    element.style[key] = styleAttributes[key];\n",
        "  }\n",
        "  return element;\n",
        "}\n",
        "\n",
        "// Max number of bytes which will be uploaded at a time.\n",
        "const MAX_PAYLOAD_SIZE = 100 * 1024;\n",
        "\n",
        "function _uploadFiles(inputId, outputId) {\n",
        "  const steps = uploadFilesStep(inputId, outputId);\n",
        "  const outputElement = document.getElementById(outputId);\n",
        "  // Cache steps on the outputElement to make it available for the next call\n",
        "  // to uploadFilesContinue from Python.\n",
        "  outputElement.steps = steps;\n",
        "\n",
        "  return _uploadFilesContinue(outputId);\n",
        "}\n",
        "\n",
        "// This is roughly an async generator (not supported in the browser yet),\n",
```

```
"// where there are multiple asynchronous steps and the Python side is going\n",
"// to poll for completion of each step.\n",
"// This uses a Promise to block the python side on completion of each step,\n",
"// then passes the result of the previous step as the input to the next step.\n",
"function _uploadFilesContinue(outputId) {\n",
"  const outputElement = document.getElementById(outputId);\n",
"  const steps = outputElement.steps;\n",
"\n",
"  const next = steps.next(outputElement.lastPromiseValue);\n",
"  return Promise.resolve(next.value.promise).then((value) => {\n",
"    // Cache the last promise value to make it available to the next\n",
"    // step of the generator.\n",
"    outputElement.lastPromiseValue = value;\n",
"    return next.value.response;\n",
"  });\n",
"}\n",
"\n",
"/**\n",
" * Generator function which is called between each async step of the upload\n",
" * process.\n",
" * @param {string} inputId Element ID of the input file picker element.\n",
" * @param {string} outputId Element ID of the output display.\n",
" * @return {!Iterable<!Object>} Iterable of next steps.\n",
" */\n",
"function* uploadFilesStep(inputId, outputId) {\n",
"  const inputElement = document.getElementById(inputId);\n",
"  inputElement.disabled = false;\n",
"\n",
"  const outputElement = document.getElementById(outputId);\n",
"  outputElement.innerHTML = '';\n",
"\n",
"  const pickedPromise = new Promise((resolve) => {\n",
"    inputElement.addEventListener('change', (e) => {\n",
"      resolve(e.target.files);\n",
"    });\n",
"  });\n",
"\n",
"  const cancel = document.createElement('button');\n",
"  inputElement.parentElement.appendChild(cancel);\n",
"  cancel.textContent = 'Cancel upload';\n",
"  const cancelPromise = new Promise((resolve) => {\n",
"    cancel.onclick = () => {\n",
"      resolve(null);\n",
"    };\n",
"  });\n",
"\n",
"  // Wait for the user to pick the files.\n",
"  const files = yield {\n",
"    promise: Promise.race([pickedPromise, cancelPromise]),\n",
"    response: {\n",
"      action: 'starting',\n",
"    }\n",
"  };\n",
"\n",
"  cancel.remove();\n",
"\n",
"  // Disable the input element since further picks are not allowed.\n",
```

```
"  inputElement.disabled = true;\n",
"\n",
"  if (!files) {\n",
"    return {\n",
"      response: {\n",
"        action: 'complete',\n",
"      }\n",
"    };\n",
"  }\n",
"\n",
"  for (const file of files) {\n",
"    const li = document.createElement('li');\n",
"    li.append(span(file.name, {fontWeight: 'bold'}));\n",
"    li.append(span(\n",
"        `(${file.type || 'n/a'}) - ${file.size} bytes, ` +\n",
"        `last modified: ${\n",
"            file.lastModifiedDate ? file.lastModifiedDate.toLocaleDateString() :\n",
"                                    'n/a'} - `));\n",
"    const percent = span('0% done');\n",
"    li.appendChild(percent);\n",
"\n",
"    outputElement.appendChild(li);\n",
"\n",
"    const fileDataPromise = new Promise((resolve) => {\n",
"      const reader = new FileReader();\n",
"      reader.onload = (e) => {\n",
"        resolve(e.target.result);\n",
"      };\n",
"      reader.readAsArrayBuffer(file);\n",
"    });\n",
"    // Wait for the data to be ready.\n",
"    let fileData = yield {\n",
"      promise: fileDataPromise,\n",
"      response: {\n",
"        action: 'continue',\n",
"      }\n",
"    };\n",
"\n",
"    // Use a chunked sending to avoid message size limits. See b/62115660.\n",
"    let position = 0;\n",
"    do {\n",
"      const length = Math.min(fileData.byteLength - position, MAX_PAYLOAD_SIZE);\n",
"      const chunk = new Uint8Array(fileData, position, length);\n",
"      position += length;\n",
"\n",
"      const base64 = btoa(String.fromCharCode.apply(null, chunk));\n",
"      yield {\n",
"        response: {\n",
"          action: 'append',\n",
"          file: file.name,\n",
"          data: base64,\n",
"        },\n",
"      };\n",
"\n",
"      let percentDone = fileData.byteLength === 0 ?\n",
"          100 :\n",
"          Math.round((position / fileData.byteLength) * 100);\n",
```

```
        "     percent.textContent = `${percentDone}% done`;\n",
        "\n",
        "    } while (position < fileData.byteLength);\n",
        "  }\n",
        "\n",
        "  // All done.\n",
        "  yield {\n",
        "    response: {\n",
        "      action: 'complete',\n",
        "    }\n",
        "  };\n",
        "}\n",
        "\n",
        "scope.google = scope.google || {};\n",
        "scope.google.colab = scope.google.colab || {};\n",
        "scope.google.colab._files = {\n",
        "  _uploadFiles,\n",
        "  _uploadFilesContinue,\n",
        "};\n",
        "})(self);\n",
        "</script> "
       ]
      },
      "metadata": {}
     },
     {
      "output_type": "stream",
      "name": "stdout",
      "text": [
       "Saving abalone.csv to abalone.csv\n"
      ]
     }
    ],
    "source": [
     "from google.colab import files\n",
     "uploaded = files.upload()"
    ]
   },
   {
    "cell_type": "code",
    "source": [
     "import pandas as pd \n",
     "import numpy as np\n",
     "import matplotlib.pyplot as plt\n",
     "import seaborn as sns\n",
     "import warnings \n",
     "warnings.filterwarnings('ignore')"
    ],
    "metadata": {
     "id": "59IIvLkEJso9"
    },
    "execution_count": 2,
    "outputs": []
   },
   {
    "cell_type": "code",
    "source": [
```

```
   "data = pd.read_csv(\"abalone.csv\")"
  ],
  "metadata": {
   "id": "AVSobcE_J_nn"
  },
  "execution_count": 3,
  "outputs": []
 },
 {
  "cell_type": "markdown",
  "source": [
   "2.Performing Visualization\n",
   "\n",
   "Univariate Analysis\n",
   "\n"
  ],
  "metadata": {
   "id": "0uFbFWnDKFnw"
  }
 },
 {
  "cell_type": "code",
  "source": [
   "data.head()"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/",
    "height": 206
   },
   "id": "XPvaB7tOKG18",
   "outputId": "1f7f3f28-fb92-46f9-fa58-091a9fc8b0c3"
  },
  "execution_count": 4,
  "outputs": [
   {
    "output_type": "execute_result",
    "data": {
     "text/plain": [
      "  Sex  Length  Diameter  Height  Whole weight  Shucked weight  Viscera weight  \\\n",
      "0   M   0.455     0.365   0.095        0.5140          0.2245          0.1010   \n",
      "1   M   0.350     0.265   0.090        0.2255          0.0995          0.0485   \n",
      "2   F   0.530     0.420   0.135        0.6770          0.2565          0.1415   \n",
      "3   M   0.440     0.365   0.125        0.5160          0.2155          0.1140   \n",
      "4   I   0.330     0.255   0.080        0.2050          0.0895          0.0395   \n",
      "\n",
      "   Shell weight  Rings  \n",
      "0         0.150     15  \n",
      "1         0.070      7  \n",
      "2         0.210      9  \n",
      "3         0.155     10  \n",
      "4         0.055      7  "
     ],
     "text/html": [
      "\n",
      "  <div id=\"df-45251dcf-d6a8-4c91-ace3-c8344b1b7ee0\">\n",
      "    <div class=\"colab-df-container\">\n",
```

```
"     <div>\n",
"<style scoped>\n",
"    .dataframe tbody tr th:only-of-type {\n",
"        vertical-align: middle;\n",
"    }\n",
"\n",
"    .dataframe tbody tr th {\n",
"        vertical-align: top;\n",
"    }\n",
"\n",
"    .dataframe thead th {\n",
"        text-align: right;\n",
"    }\n",
"</style>\n",
"<table border=\"1\" class=\"dataframe\">\n",
"  <thead>\n",
"    <tr style=\"text-align: right;\">\n",
"      <th></th>\n",
"      <th>Sex</th>\n",
"      <th>Length</th>\n",
"      <th>Diameter</th>\n",
"      <th>Height</th>\n",
"      <th>Whole weight</th>\n",
"      <th>Shucked weight</th>\n",
"      <th>Viscera weight</th>\n",
"      <th>Shell weight</th>\n",
"      <th>Rings</th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>0</th>\n",
"      <td>M</td>\n",
"      <td>0.455</td>\n",
"      <td>0.365</td>\n",
"      <td>0.095</td>\n",
"      <td>0.5140</td>\n",
"      <td>0.2245</td>\n",
"      <td>0.1010</td>\n",
"      <td>0.150</td>\n",
"      <td>15</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>1</th>\n",
"      <td>M</td>\n",
"      <td>0.350</td>\n",
"      <td>0.265</td>\n",
"      <td>0.090</td>\n",
"      <td>0.2255</td>\n",
"      <td>0.0995</td>\n",
"      <td>0.0485</td>\n",
"      <td>0.070</td>\n",
"      <td>7</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>2</th>\n",
"      <td>F</td>\n",
```

```
"     <td>0.530</td>\n",
"     <td>0.420</td>\n",
"     <td>0.135</td>\n",
"     <td>0.6770</td>\n",
"     <td>0.2565</td>\n",
"     <td>0.1415</td>\n",
"     <td>0.210</td>\n",
"     <td>9</td>\n",
"   </tr>\n",
"   <tr>\n",
"     <th>3</th>\n",
"     <td>M</td>\n",
"     <td>0.440</td>\n",
"     <td>0.365</td>\n",
"     <td>0.125</td>\n",
"     <td>0.5160</td>\n",
"     <td>0.2155</td>\n",
"     <td>0.1140</td>\n",
"     <td>0.155</td>\n",
"     <td>10</td>\n",
"   </tr>\n",
"   <tr>\n",
"     <th>4</th>\n",
"     <td>I</td>\n",
"     <td>0.330</td>\n",
"     <td>0.255</td>\n",
"     <td>0.080</td>\n",
"     <td>0.2050</td>\n",
"     <td>0.0895</td>\n",
"     <td>0.0395</td>\n",
"     <td>0.055</td>\n",
"     <td>7</td>\n",
"   </tr>\n",
"  </tbody>\n",
"</table>\n",
"</div>\n",
"     <button class=\"colab-df-convert\" onclick=\"convertToInteractive('df-45251dcf-d6a8-
4c91-ace3-c8344b1b7ee0')\"\n",
"             title=\"Convert this dataframe to an interactive table.\"\n",
"             style=\"display:none;\">\n",
"       \n",
"  <svg xmlns=\"http://www.w3.org/2000/svg\" height=\"24px\"viewBox=\"0 0 24 24\"\n",
"       width=\"24px\">\n",
"    <path d=\"M0 0h24v24H0V0z\" fill=\"none\"/>\n",
"    <path d=\"M18.56 5.44l.94 2.06.94-2.06 2.06-.94-2.06-.94-.94-2.06-.94 2.06-2.06.94zm-11
1L8.5 8.5l.94-2.06 2.06-.94-2.06-.94L8.5 2.5l-.94 2.06-2.06.94zm10 10l.94 2.06.94-2.06 2.06-.94-2.06-
.94-.94-2.06-.94 2.06-2.06.94z\"/><path d=\"M17.41 7.96l-1.37-1.37c-.4-.4-.92-.59-1.43-.59-.52 0-
1.04.2-1.43.59L10.3 9.45l-7.72 7.72c-.78.78-.78 2.05 0 2.83L4 21.41c.39.39.9.59 1.41.59.51 0 1.02-.2
1.41-.59l7.78-7.78 2.81-2.81c.8-.78.8-2.07 0-2.86zM5.41 20L4 18.59l7.72-7.72 1.47 1.35L5.41
20z\"/>\n",
"  </svg>\n",
"     </button>\n",
"     \n",
"  <style>\n",
"    .colab-df-container {\n",
"      display:flex;\n",
"      flex-wrap:wrap;\n",
```

```
"      gap: 12px;\n",
"    }\n",
"\n",
"    .colab-df-convert {\n",
"      background-color: #E8F0FE;\n",
"      border: none;\n",
"      border-radius: 50%;\n",
"      cursor: pointer;\n",
"      display: none;\n",
"      fill: #1967D2;\n",
"      height: 32px;\n",
"      padding: 0 0 0 0;\n",
"      width: 32px;\n",
"    }\n",
"\n",
"    .colab-df-convert:hover {\n",
"      background-color: #E2EBFA;\n",
"      box-shadow: 0px 1px 2px rgba(60, 64, 67, 0.3), 0px 1px 3px 1px rgba(60, 64, 67, 0.15);\n",
"      fill: #174EA6;\n",
"    }\n",
"\n",
"    [theme=dark] .colab-df-convert {\n",
"      background-color: #3B4455;\n",
"      fill: #D2E3FC;\n",
"    }\n",
"\n",
"    [theme=dark] .colab-df-convert:hover {\n",
"      background-color: #434B5C;\n",
"      box-shadow: 0px 1px 3px 1px rgba(0, 0, 0, 0.15);\n",
"      filter: drop-shadow(0px 1px 2px rgba(0, 0, 0, 0.3));\n",
"      fill: #FFFFFF;\n",
"    }\n",
"  </style>\n",
"\n",
"      <script>\n",
"        const buttonEl =\n",
"          document.querySelector('#df-45251dcf-d6a8-4c91-ace3-c8344b1b7ee0 button.colab-
df-convert');\n",
"        buttonEl.style.display =\n",
"          google.colab.kernel.accessAllowed ? 'block' : 'none';\n",
"\n",
"        async function convertToInteractive(key) {\n",
"          const element = document.querySelector('#df-45251dcf-d6a8-4c91-ace3-
c8344b1b7ee0');\n",
"          const dataTable =\n",
"            await google.colab.kernel.invokeFunction('convertToInteractive',\n",
"                                                     [key], {});\n",
"          if (!dataTable) return;\n",
"\n",
"          const docLinkHtml = 'Like what you see? Visit the ' +\n",
"            '<a target=\"_blank\"
href=https://colab.research.google.com/notebooks/data_table.ipynb>data table notebook</a>'\n",
"            + ' to learn more about interactive tables.';\n",
"          element.innerHTML = '';\n",
"          dataTable['output_type'] = 'display_data';\n",
"          await google.colab.output.renderOutput(dataTable, element);\n",
"          const docLink = document.createElement('div');\n",
```

```
          "        docLink.innerHTML = docLinkHtml;\n",
          "        element.appendChild(docLink);\n",
          "      }\n",
          "    </script>\n",
          "  </div>\n",
          " "
         ]
        },
        "metadata": {},
        "execution_count": 4
       }
      ]
     },
     {
      "cell_type": "code",
      "source": [
       "sns.boxplot(data['Diameter'])"
      ],
      "metadata": {
       "colab": {
        "base_uri": "https://localhost:8080/",
        "height": 296
       },
       "id": "ILlDec-SKPO6",
       "outputId": "c6077606-4aff-4509-c506-8b905790fb19"
      },
      "execution_count": 5,
      "outputs": [
       {
        "output_type": "execute_result",
        "data": {
         "text/plain": [
          "<matplotlib.axes._subplots.AxesSubplot at 0x7f39f241ae50>"
         ]
        },
        "metadata": {},
        "execution_count": 5
       },
       {
        "output_type": "display_data",
        "data": {
         "text/plain": [
          "<Figure size 432x288 with 1 Axes>"
         ],
         "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAANcElEQVR4nO3dcWyc91nA91nGWshTEz
UCTgiFopSsfY1BSBWpqi0WoIpWkz0FASqSprmBioUNIglPaPJaqiouSfNsNEtGsmRKVKOLRZ6MjoNUvEIrFl
LnSp03Z18uOPO7v2LcV3tu8en/39/+/h5s+r/OUUpBktR5PdkDSlkOSkhhGS
UrS1rGK1ZIWPHJ/8/lHJN4/8/h4eG5m0qSFoGIOHO56z0FIUlJDLAkJTHAkpTE
AEtSEgMsSlSAyxJUkMcCQlMcCRlMcCRlMcCRlMcCRlMcCRlMcCRlMcCRlMcCRlMcCQ1
MQAS1ISAyxJSQywJCUxwJKUxABLUhIDLElJDLAkJTHAkpTEAEtSEgMsSUkMs
CQlMcCSlKSl3wknzTe7d++mWq1mj/Ejzp49C8CqVas6ts+BgQG2bNnWuWgG
U/ReeB2A/367M99ivRde68h+NLcMsLrexauu5s3rN2aPMcWSk0MAHZtrfH/qLp4DlqQkBliSkhhgSUpigC
UpiQGWpCQGWJKSGGBJSmKAJSmJAZakJAZYkpIYYElYOAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGWJKSGGBJSmKAJSmJA
ZakJAZYkpIYYElYOAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGWJKSGGBJSmKAJSmJA
```

ZakJAZYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGuEW7d+9m9+7d2WNI6pB2fs/3teVeF7Bq
tZo9gqQOauf3vEfAkpTEAEtSEgMsSUkMsCQlMcCSlMQAS1ISAyxJSQywJCUxwJKUxABLUhIDLElJDLAkJTH
AkpTEAEtSEgMsSUkMsCQlMcCSlMQAS1ISAyxJSQywJCUxwJKUxABLUhIDLElJDLAkJTHAkpTEAEtSEgMsS
UkMsCQlMcCSlMQAS1ISAyxJSQywJCUxwJKUxABLUhIDLElJDLAkJTHAkpTEAEtSko4EeGRkhHvvvZeRkZE
5uZ9qtTpxf9VqlVtuuYUDBw5QqVQ4evQozz333MTl8dsff/xxKpUKhw8f5rHHHqNSqXD33XdTqVTYs2cPT
z31FJVKhUcffZT169dz7NixiesOHz7M9u3bqVQqnDp1ao7+ViQtdn2d2Mm+ffs4ceIE+/fv5/7775/1/Tz00E
OcOXOG/fv3c/z4cUZHR9m7dy8Au3btmth+165drF69mtHRUZ544gkAHn74YUopALzyyisAHDx4kIgA4NC
hQwA88MADjI6O/sifOX/+/Iznl6TJ2n4EPDIywpEjRyilcOTIkRkfBU++n9OnT1NKYWhoiNOnT0/ZbmxsjLGx
sYnLjbePh7RR4/VvvPHGxHWNt3kULGkutP0IeN++fVy6dAmAixcvzvgoePL9jHvnnXfmZMZWnT9/nq1bt6
bsW1NVq1V6fnj5f1QXk563fkC16tdlO1SrVZYsWdKW+572CDgi7omI4YgYPnfuXMs7ePbZZ6cckT7zzDOtT
9lwP5K0EEx7BFxK2QvsBRgcHGz5UOOmm25iaGiIsbEx+vr6uPnmm2cw5tT7mQ8eeeSR7BEEbN26lWOn
vps9RrpLV76PgTXX+XXZBu38X0XbzwFv3ryZnp7abnp7e7nzzjtnfT/jrrjiilnPNxPLly9P2a+khaXtAV6xYgUb
NmwgItiwYQMrVqyY9f309/cTEWzcuJH+/v4p2/X19dHX1zdxufH28Wc7NGq8ftmyZRPXNd62Zs2aGa1Bk
ibryPOAN2/ezA033DDjo9/G+9m5c+fE/e3cuZOlS5dyzz33ALBjxw62b98+cXn89jvuuAOAbdu2cfvttwOwd
u1aAG677Tbuu+8+ADZt2kRPTw8PNcHCwDA8Pt3Gc+W/8fJDn2ua
H8XPAb16/MXuUKZacHALo2FxLTg7xcc8Bt8VcfM9HxLFSymDj9b4UWZKSGGBJSmKAJSmJAZakJAZYkpIY
YElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGWJKSGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQk
BliSkhhgSUpigCUpiQGWpCQGWJKSGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpi
QGWpCQGWJKSGGBJStKXPUC3GRgYyB5BUge183veALdoy5Yt2SNI6qB2fs97CkKSkhhgSUpigCUpiQGW
pCQGWJKSGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGWJKSGGBJS
mKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGWJKSGGBJSmKAJSmJAZakJAZY
kpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCR92QNIs9V74TWWnBzKHmOK3gsjAB2bq/fCa8B1Hd
mX5o4BVlcbGBjIHuGyzp4dA2DVqk5F8bp5+3eh92aA1dW2bNmSPYI0Y54DlqQkBliSkhhgSUpigCUpiQG
WpCQGWJKSGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGWJKSGGBJ
SmKAJSlJlFKa3zjiHHCmfePM2Erg+9lDzBHXMj8tpLXAwlpPN6zlg6WUaxqvbCnA81VEDJdSBrPnmAuuZX5
aSGuBhbWebl6LpyAkKYkBlqQkCyXAe7MHmEOuZX5aSGuBhbWerl3LgjgHLEndaKEcAUtS1zHAkpSkqwIc
ERsi4lsRUY2IP7nM7b8aEf8WEWMRsSljxmY1sZZtEfHNiPhGRHwtIj6YMWczmljL5yLiRES8FBH/EhEfyZizG
dOtZdJ2t0ZEiYh5+/SnJh6XuyLiXP1xeSkifj9jzmY087hExG/Vv2dejogDnZ5xRkopXfEB9AKvAmuAHwOOAx
9p2KYfuBHYD2zKnnmWa/l14Kr65T8A/j577lms5X2TLn8KOJI990zXUt9uOfDPwAvAYPbcs3hc7gIezZ51jta
yFngR+Mn659dmz93MRzcdAX8CqJZSTpVSfgg8Cfzm5A1KKadLKd8ALmUM2IJm1nK0lHKh/ukLwOoOz9i
sZtbyg0mfLgXm609+p11L3ReBPwfe6uRwLWp2Ld2gmbXcDewppfwPQCnlex2ecUa6KcCrgP+a9Pl36td1
o1bX8lngH9s60cw1tZaI+MOIeBX4MnBvh2Zr1bRriYhfAD5QSvmHTg42A81+jd1aP811KCI+0JnRWtbMW
j4MfDgino+IFyJiQ8emm4VuCvCiFBF3AIPAX2TPMhullD2llA8BXwB2Zs8zExHRAzwMfD57ljlyGOgvpdwIP
APsS55nNvqonYaoAL8DPBYRP5E6URO6KcBngcn/Qq+uX9eNmlpLRNwE7AA+VUp5u0OztarVx+VJ4NNtn
WjmplvLcuCjwNcj4jTwy8DT8/QHcdM+LqWUkUlfV48DH+/QbK1q5mvsO8DTpZR3SinfBv6ydevWnT9/
C2ciO8DTgE/zbsn4n/2Pbb9CvP7h3DTrgX4GLUfPKzNnncO1rJ20uXfAIaz557t11h9+68zf38I18zj8lOTLn8
GeCF77lmsZQOwr355JbVTFiuyZ592bdkDtPhAbKT2L9urwI76dX9K7QgR4Bep/Us4CowAL2fPPIu1PAt8F3
ip/vF09syzWMsjwMv1dRz9/6KW/THdWhq2nbcBbvJx+VL9cTlef1yuz555FmsJaqeHvgmcAH47e+ZmPnw
psiQl6aZzwJK0oBhgSUpigCUpiQGWpCQGWJKSGGB1VERcrL/z1ssRcTwiPl9/hRkRMRgRf9Pm/X96Pr8bm
xYXn4amjoqIN0opy+qXrwUOAM+XUh7o6P6/Any1lHKohT/TV0oZa99UWqwMsDpqcoDrn68B/pXaq5d+
DfijUsonI+IT1cAcSXwJvB7VPhHTgtTtgfX0/q4F1pZSLbVq+FjkDrPnq/cC+iFhL7f2
Dr5h029FSynngfES4Tu1dvaD2EtQbI2IZsA44GBHjf+bHG3fQxHYHja/ayQArVf0UxEXge8DPTLrpi9RC+5mI
6Kf2vgvjJr8z3KVJn1+i9jXdA/xvKeXnp9n9dNuNNrEEacZ8FoTSRMQ1wN9R+7U4jT+MeD/vvuXgXa3cb6n
9Bo5vR8Rt9f1ERPxc/ebz1N5WcrrtpLYzwOq0JeNPQ6P2jm//BDx4me2+DHwpIl5kZv9Tux34bEQcp/aOX
+O/wuZJ4I8j4sX6D+reazup7XwWhCQl8QhYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpyf8B6t3huXNAY7
AAAAAASUVORK5CYII=\n"
        },
        "metadata": {
          "needs_background": "light"
        }
      }
    ]
  },
  {
    "cell_type": "code",

"source": [
 "plt.hist(data['Diameter'])"
],
"metadata": {
 "colab": {
  "base_uri": "https://localhost:8080/",
  "height": 352
 },
 "id": "CAGV83C2KTc2",
 "outputId": "b03f4c23-8cfa-414c-b05e-1a853961b43d"
},
"execution_count": 6,
"outputs": [
 {
  "output_type": "execute_result",
  "data": {
   "text/plain": [
    "(array([13., 66., 180., 344., 513., 812., 1017., 934., 275.,\n",
    " 23.]),\n",
    " array([0.055 , 0.1145, 0.174 , 0.2335, 0.293 , 0.3525, 0.412 , 0.4715,\n",
    " 0.531 , 0.5905, 0.65]),\n",
    " <a list of 10 Patch objects>)"
   ]
  },
  "metadata": {},
  "execution_count": 6
 },
 {
  "output_type": "display_data",
  "data": {
   "text/plain": [
    "<Figure size 432x288 with 1 Axes>"
   ],
   "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAX0AAAD4CAYAAAAAczaOAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAO+ElEQVR4nO3df4xlZX3H8fdHttj6oy6yU0J3Nx1a1zbE2IhTpDEx
Vozlh2FJRKppdSFrN22w2mJat60JifYPaBsppoa4BdolsVVKTdkWqyGIMTaBiYGtdEdzdgIyI2JZY3fjtH/f
BDuvM7p17Z++d5Xm/kps55znPuef75M587slzzz2TqkKS1IfnTLLsASdLkGPqS1BFDX5I6YuhLUkcMfUnqyL
ppF3AkGzZsqNnZ2WmXIUnHlbvvvvvtbVTWz1LY1Hfqzs7PMz89PuwxJOq4keXi5bU7bU7uihL0vSFJHJH1J6oihL
MfQlqSOGviR1xNCXpI4Y+pLUEUNfkjpi6EtSR476jdwkNwBvBB6rqpe1BrHHOA5
4CLqmqe9o+24D3taf9s6ravbpDkfowu/PWqR37oSvPn9qxtTqGOdP/O+Ccw9p2ArdX1Rbg9rYOcC6wpT1sS
2ANfCj94krgBeBZwJXJHkpHGLlySty2FFDv6o+B3z7sOwNNwW1V9u6qe
AG7jx99IJEnH2Khz+qdU1Sm8+qdU1SNt+VvgFGDtubmSq2YY3qR7dTtxYTQkCHOvZ9X1a6q
mququZmZJe8MKkka0aih/802bUP7+VhrPwhsXtRvU2tbHl2SNEGjhv4eYGe7ZlwWg+ekV1NetBGc
DkpPaB7hvaG2SpAka5pLNfwBeC2xIcoDBVThXAJcl2bMzkpjhc+CU+0fu+vq
sM/HJYkHWNHDf2qeusym7Yv3S6Cv9eDb8yeZ8J5g+Sz8fsfMCvvBi+oQk3pzXOn9qen7sTQHJS9oZVaL+3L
hr4kdcTQl6SOHPXLWZL0tGn9Axf/ecvq8Uxfkjpi6EtSR0x9CWpI4a+JHXE0Jekjhj6ktQRQ1+SOmLoS1JHDH1J6ihL0kdMfQl
qSOGviR1xNCXpI6sG2fnJH8AvApcpCpwMeAk4G7gbdV1feTPBe4e4EXgl8DjwG1X10DjHl6Zpduet0y5BWrGZz/S
TbATeBcxV1cuAE4C3AFcBV1fVS4D/ArZW8+3Ksk64HnAI8DrgJvb9t3AhW1ifKPvpu+3Ms64HnAl8DrgJvb9t3AhW15a1
unbT87ScY8viRpBUYO/ao6CPwl8A0E9GYf8kg+mc71TVodbtALCxLW8E9rd9D7X+Jx/+vEl2JJlPMr+wsDBqe
ZKkJYwzvXMSg7P3zcCfBZ4PnDNd9rq6qmHeA+TwamB9m
4B2AQcbMsHgc0AAbfuLGHygK0makHFC/xvAWUme1+4T9xaMd2tBSC/xvAWUme1+bmzwYeAO4ALmp9tgG3TUTUV8IX
5K0QuPM6d/F4APAJ4ZexhcrvkcYBfwXuDyJPJsYzNIf33a5Hji5tV8O7JzoBSyCMa6Tr+qgrgCuOKz5PuDMJfp+D3jz
D3jzOMeTJI3Hb+RKUkcMfUnqiKEvSR0x9CWpI4a+JHXE0Jekjhj6ktQRQ1+SOmLoS1JHDH1J6oihL0kdMfQ
lqSOGviR1xNCXpI4Y+pLUEUNfkjpi6EtSRwx9SeqIoS9JHTH0Jakjhr4kdcTQl6SOGPqS1BFDX5I6YuhLUkcMf

UnqiKEvSR0x9CWpI4a+JHXE0Jekjhj6ktSRsUI/yfokNyf5jyR7k/xqkhcnuS3JV9vPk1rfJPlQkn1J7ktyxuoMQ
Zl0rHHP9K8BPlVVvwT8MrAX2AncXlVbgNvbOsC5wJb22AFcO+axJUkrNHLoJ3kR8BrgeoCq+n5VfQfYCux
u3XYDF7blrcCNNXAnsD7JqSNXLklasXHO9E8DFoC/TfLFJNcleT5wSlU90vo8CpzSljcC+xftf6C1SZImZJzQX
wecAVxbVa8A/of/n8oBoKoKqJU8aZIdSeaTzC8sLIxRniTpcOOE/gHgQFXd1dZvZvAm8M2np23az8fa9oPA
5kX7b2ptz1BVu6pqrqrmZmZmxihPknS4kUO/qh4F9if5xdZ0NvAAsAfY1tq2Abe05T3A29tVPGcBTy6aBpI
kTcC6Mff/PeCjSU4EHgQuZfBGclOS7cDDwMWt7yeB84B9wFOtryRpgsYK/aq6F5hbYtPZS/Qt4LJxjidJGo/f
yJWkjhj6ktQRQ1+SOmLoS1JHDH1J6oihL0kdMfQlqSOGviR1xNCXpI4Y+pLUEUNfkjpi6EtSR8a9y6Y0VbM
7b512CdJxxTN9SeqIoS9JHTH0Jakjhr4kdcTQl6SOGPqS1BFDX5I6YuhLUkcMfUnqiKEvSR0x9CWpI4a+JHX
E0Jekjhj6ktQRQ1+SOmLoS1JHDH1J6oihL0kdMfQlqSNjh36SE5J8Mcm/tvXTktyVZF+Sjyc5sbU/t63va9tnx
z22JGllVuNM/93A3kXrVwFXV9VLgCeA7a19O/BEa7+69ZMkTdBYoZ9kE3A+cF1bD/A64ObWZTdwYVve2
tZp289u/SVJEzLumf5fAX8E/LCtnwx8p6oOtfUDwMa2vBHYD9C2P9n6P0OSHUnmk8wvLCyMWZ4kabGR
Qz/JG4HHquruVayHqtpVVXNVNTczM7OaTy1J3Vs3xr6vBi5Ich7wk8BPA9cA65Osa2fzm4CDrf9BYDNwI
Mk64EXA42McX5K0QiOf6VfVH1fVpqqaBd4CfKaqfhO4A7ioddsG3NKW97R12vbPVFWNenxJ0sodi+v03
wtcnmQfgzn761v79cDJrf1yYOcxOLYk6QjGmd75kar6LPDZtvwgcOYSfb4HvHk1jidJGo3fyJWkjhj6ktQRQ1
+SOmLoS1JHDH1J6oihL0kdWZVLNqXZnbdOuwRJQ/BMX5I6YuhLUkcMfUnqiKEvSR0x9CWpI4a+JHXE0J
ekjhj6ktQRQ1+SOmLoS1JHDH1J6oihL0kdMfQlqSPeZVPSmjetu7g+dOX5UznuseSZviR1xNCXpI4Y+pLUE
UNfkjpi6EtSRwx9SeqIoS9JHTH0Jakjhr4kdcTQl6SOGPqS1JGRQz/J5iR3JHkgyf1J3t3aX5zktiRfbT9Pau1J8q
Ek+5Lcl+SM1RqEJGk445zpHwLeU1WnA2cBlyU5HdgJ3F5VW4Db2zrAucCW9tgBXDvGsSVJIxg59Kvqkaq
6py3/F7AX2AhsBXa3bruBC9vyVuDGGrgTWJ/k1JErlySt2KrM6SeZBV4B3AWcUlWPtE2PAqe05Y3A/kW7
HWhthz/XjiTzSeYXFhZWozxJUjN26Cd5AfBPwO9X1XcXb6uqAmolz1dVu6pqrqrmZmZmxi1PkrTIWKGf5C
cYBP5Hq+oTrfmbT0/btJ+PtfaDwOZFu29qbZKkCRnn6p0A1wN7q+qDizbtAba15W3ALYva396u4jkLeHLR
NJAkaQLG+XeJrwbeBnw5yb2t7U+AK4GbkmwHHgYubts+CZwH7AOeAi4d49hawrT+pZyk48fIoV9Vnwey
zOazl+hfwGWjHk+SND6/kStJHTH0Jakjhr4kdcTQl6SOGPqS1BFDX5I6YuhLUkcMfUnqiKEvSR0x9CWp
JHEvTkJHDH1J6oihL0kdMfQlqSOGPqS1BFDX5I6YuhLUkcMfUnqiKEvSR0x9CWpIkAkQLG+XeJrwbeBnw5yb2t7U+AK4GbkmwHHgYubts+CZwH7AOeAi4d49hawrT+pZyk48fIoV9Vnwey
zOazl+hfwGWjHk+SND6/kStJHTH0Jakjhr4kdcTQl6SOGPqS1BFDX5I6YuhLUkcMfUnqiKEvSR0x9CWpI4a+
JHXE0Jekjhj6ktQRQ1+SOmLoS1JHDH1J6oihL0kdMfUnqSOGviR1xNCXpIBJwHVVdeWxOpa3Q5CkZ5romX6SE4APA+cCpNvTXL6JGuQpJ5NenrnTGBfVT1YVd8HP
gZsnXANktStSU/vbAT2L1o/ALxqcYckO4AdbfW/k3xlQrWt1AbgW9MuYpU4lrXJsaxNExlLrhpr959bbsOau
3qnqnYBu6Zdx9Ekma+quWnXsRocy9rkWNam430sk57eOQhsXrS+qbVJkiZg0qH/BWBLktOSnAi8Bdgz4R
okqVsTnd6pqkNJ3gl8msElmzdU1f2TrGEVrfkpqBVwLGuTY1mbjuuxpKqmXYMkaUL8Rq4kdcTQl6SOGPp
HkOScJF9Jsi/JziW2vybJPUkOJbloGjUOa4ixXJ7kgST3Jbk9ybLX+a4FQ4znd5J8Ocm9ST6/lr/5fbSxLOr3piSV
ZM1eLjjE63JJkoX2utyb5B3TqHMYw7wuSS5ufzf3J/n7Sdc4kqryscSDwQfNXwN+HjgR+wN+BJw3Jbk9ybLX
CF0275jHH8mvA89ry7wIfn3bdY47npxctXwB8atp1jzqW1u+FwOeAO4G5adc9xutyCfDX0651cayBfgicFJ
b/5lp1z3MwzP95R31lhFV9VBV3Qf8cBoFrsAwY7mjqp5qq3cy+A7FWjXMeL67aPX5wFq9YmHYW5N8AL
gK+N4ki1uhZ9NtVoYZy28DH66qJwCq6rEJ1zgSQ395S90yYuOUahnXSseyHfi3Y1rReIYaT5LLknwN+HPgX
ROqbaWOOpYkZwCbq2qt3zZ22N+zN7VpxJuTbF5i+1owzFheCrw0yb8nubPdQXjNM/T1DEl+C5gD/mLat
Yyrqj5cVb8AvBd437Bd437TrGUWS5wAfBN4z7VpWyb8As1X1cuA2YPeU6xnHOgZTPK8F3gr8TZL1gR8TZL1U61oCIb+8p
5Nt4wYaixJXg/8KXBBVf3vhGobxUpfm48BFx7TikZ3tLG8EHgZ8NkkDwFnAXvW6Ie5R31dqurxRb9b1wGv
nFBtKzXM79gBYE9V/aCqvg4BXTXN0F/es+mWEUcdS5JXAB9hEPhrfW5ymPEs/uM7H/jqBOtbiSOO
paqerKoNVTVbMMPm+5oKrmp1PuEQ3zupy6aPUCYO8E61uJYf7+/5nBWT5JNjCY7nlwkkWOwtBfRlU
dAp6+ZcRe4Kaquj/J+5NcAJDkV5IcNp6IcAN4sG1K5R
7RkGM5Lgw5lne11+VLDD5nuWQ61R7ZkGP5NPB4kgeAO4A/rKrHp1Px8LwNgyR1xDN9SeqIoS9JHTH0J
akjhr4kdcTQl6SOGPqS1BFDX5I68n/BKed+31/L4AAAAABJRU5ErkJggg==\n"
       },
       "metadata": {
        "needs_background": "light"
       }
      }
     ]
    },
    {
     "cell_type": "code",
     "source": [
      "plt.plot(data['Diameter'].head(10))"
     ],
     "metadata": {
      "colab": {
       "base_uri": "https://localhost:8080/",

```
      "height": 282
     },
     "id": "7SFpI0mXKXaD",
     "outputId": "753a1fa7-e0d0-4604-bdf7-e13112791187"
    },
    "execution_count": 7,
    "outputs": [
     {
      "output_type": "execute_result",
      "data": {
       "text/plain": [
        "[<matplotlib.lines.Line2D at 0x7f39f1e92e50>]"
       ]
      },
      "metadata": {},
      "execution_count": 7
     },
     {
      "output_type": "display_data",
      "data": {
       "text/plain": [
        "<Figure size 432x288 with 1 Axes>"
       ],
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAYAAAAD4CAYAAADlwTGnAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAgAElEQVR4nO3deXhcV3n48e+rfd9hHjJyxIlkja2buL
O/nefxEc+feO+9MpHnvPec954gxBqWUUtEnxuoAlFJKWUMTgFJKRSlNAEopFaU0ASilVJTSBKCUUlEqzuo
ApiMvL8+UlpZaHYZSSoWVHTt2dBhjbOO3h1UCKC0tZfv27VaHoZRSYUVEDk+0XZuAlFIqSmkCUE+x
QCmlopQmAKUUipKaAJRSKkpqAlBKqSipCUAppaKkJgCllIqSmgCUUipKagJQSqkoqQlAKaWipCYA
pZSKkpoAlFIqSmoCUEqpKKkJQCmlomTMJoDnnnuOyy+/nIKCAkSEJ554IuR1YwwPPPAA+fn5pKam
snTpUnbv3h1SprGxkeuvv56srCxycnK4+eabaWlpCSmzZcsWLrroIlJSUigsLOShhx4aVpdHHnmE
adOmkZKSwuzZs3nmmWdGXBellVGRkZGMmJgYMjIyQkJCQkNDQ0JCQkNDQ0JCQkNDQ0JCQkNDQ0JC
ApiMvL8+UlpZaHYZSSoWVHTt2dBhjbOO3h1UCKC0tZfv27VaHoZRSYUVEDk+0XZuAlFIqSmkCUE+x
9G/9Co38+tCUAppUJU98Awj756hI1LZlGSk+L382sCUEqpEPWrN47SPTjC7avnBeT8mgCUUioEjYy6+OlLh
1hZmsOykqyAvIYmAKWUCkGbdp+gvbOfT64JzNU/aAJQSqmQY4zh4boDzMtL5ZrK/IC9jiYApZQKMa+2n
WF3exd/vXoeMTESsNfRBKCUUiHmkfo2clMT+PNLigL6OpoAlFIqhLSe6uaFfaf48Kq5JMXHBvS1NAEopVQ
I+XH9QRLjYvjw5XMD/lqaAJRSKkSc6h7gt2+2875Li8lNSwz462kCUEqpEPHzVw4z7HLxiavKgvJ6mgCUUio
E9A+N8vNXD3PtogLm2dKC8po+JQAR2SAi+0WkVUTuucB+7xURIyI1nsfXicgOEWn0/Pdqr323es650/Mvc
MWuSikV4p7YcZTOvmFuD+DAr/HiptpBRGKBh4DrADvwhog8aYzZM26/dOBO4DWvzR3Ae4wxx0RkMb
AZ8K5r+pAxZvsM34NSSoW1UZfhxy8eZHlJFjVzs4P2ur7cAawEWo0xbcaYIeAx4OYJ9vs68E1gYGyDMeYtY
8wxz8MmIFlEAt+zoZQKW/azfTz62hGOnumzOpSg+dOeExw+3ccnV89DJHADv8ab8g4A9xX7Ua/HduAy7
x1E5BKgxBjztIj8wyTneS/wpjHGe1WDn4rIKPAb4F+MMWb8QSJyO3A7wvIVykVTowxNJ/sYXPTCT
Y3naDpWBcANXOz+fWnVwX1C9Eqj9QfpCQnmdrqgqC+ri8J4IJEJAZ4EPjoBfapxn13cL3X5g8ZY9o9TUe/A
T4M/O/4Y40xDwMPA9TU1LwjQSilwo/LZXjraCfPer70D512X+1fMieLL22sZHjUxbeebeYPDce5adlsi6MNr
B2Hz7Dj8Fn++T1VxMUGty7HlwTQDpR4PS72bBuTDiwGtnoydSHwpIjcZIzZLiLFwO+AjxhjDowdZIxp9/y3
W0Qexd3U9I4EoJSKDEMjLl5tO83mphP8ac9JTnUPEhcjrJqfy1+vnsf1VQXkZyQB7jbxTY0n+MamvVy3qID
khMCOiLXSI3UHyUyO5/01JVPv7Ge+JIA3gHIRKcP9xX8r8BdjTxpjnEDe2GMR2Qr8vefLPwt4GrjHGPOS1z
5xQJYxpkNE4oEbgef88H6UUiGkd3CEbc0ONjed4IV9p+geGCElIZZ1FTZqqwtZV5FPZnL8O46LjRH+6T1VfP
DhV3m4ro07ry23IPrAO9TRy+Y9J/ibtfNJTZxxg8y0TfmKxpgREbkDdwVPLPATY0yTiNwHbDfGPHmBw+8A
FgD3isi9nm3XA73AZs+XfyzuL/9HZvA+1DT0DI6QmhAbFW2rKvjO9A7x3N6TPNt0gvqWDgZHXGSnxLOhu
pDa6kKuKs/zaY6by+blcsOSWfzntlbeX1PM7KzkIEQfXD956SBxMcJHryi15PVlgn7XkFVTU2O2b9eq0Zlw9
g+z6t+e585ryvnU2vlWh6MiRHtn/7n2/NcPnsFloCgrmeuqCqitLuRdpdkX1b599Ewf1zy4jY2LC/nerSsCELl
1zvYOseobz/OepbP59/cvC+hricgOY0zN+O3Bv+dQlmqwd9I3NMr3nm/hlhVFFHjaXJWaDmMMLad62Lz
7BM/uOUljuxOAhQVpfHb9AmqrC6menTHju8ySnBQ+tWYe33+hlY+smsulc3P8EX5I+L9XDzMw7Aroil9T
0QQQZRrs7j/UkVHDN/+4jwc/sNziiFS4cLkMO+2dbG46wbNNJznY0QvAijlZ3LOxktrqQsryUv3+up9eO5/H
tx/la3/Yw//7zJUBXSAlWAaGR/mfVw6zdqGNhQXplsWhCSDKNNqdlOamsHHJLP5z6wE+sqqU5QFacFqFv
+HR8yt3Tna9XbnziavKuK6qIOB3kamJcXxxQyV3Pb6L377lnikz3P1+ZzsdPYNBnfZhIpoAokyDvZNLS3P47P
oFPLHDztf+0MRv/+YK7RBW5/QNjVDX7GBz00me33uSroERkuPfrtxZXzlx5U4g3bK8iP995TAP/HEfGxYXk
mZBxYy/uFyGR+oPUjUrgyvm51oaS/h+imraHN2DHHMO8LGiTNIS47i7toJ/eKKB3+88xi0rArv0nAoPD21p
```

5T+ebzlXuXO9p3JntY+VO4ES4ykL/bMfvswPt7Ry94ZKy2KZqa3Np2g91cN3P7jc8gsvTQBRZLeno25pcSYA
772kmJ+/ephvPLOP66sLSEnQX4doNjgyyg9eaGXFnCzuvGbhRVfuBMqKOdn82YoifvziQW5bOYeSnBSrQ
7ooj9QdZFZmEjcsnWV1KLoeQDRpsDsRgeoidwKIiRHuvbGKE10D/GjrgSmOVpHuzcOd9A+P8omr5rFqfm
5IffmP+eKGSmJF+NdNe60O5aI02p280naaj11ZSnwIfL7WR6CCpsHeyXxb2nntpzWlOdy0bDb/VdeG/Wz
0zL6o3qmuxXGugzdUFWYm8Zl183lm9wleOXDa6nCm7ZH6NtIS47h1ZWhMbKkJIEoYY2hod7LUc/Xv7Z6
NlYjAN57ZZ0FkKlTUtzi4ZG52yHewfnLNPIqykrnvqT2MusJnIGt7Zz9PNx7ntpUlZCQFtxN9MpoAosTJrkEc3
YPn2v+9zc5K5lNr5vNUw3FeP3jGguiU1Tp6Btnd3sXahTarQ5lSUnwsX3p3JXuPd/GrN45OfUCI+OmLBwH
46JXBWe/XF5oAosQueycAS4onrvn/9Nr5zMpM4r6nmnCF0VWV8o+XWjsAWF2eN8WeoeGGJbNYWZr
Dt5/dj7N/2OpwpuTsH+aXrx/hxqWzKAqhOY00AUSJRruT2BihalbGhM8nJ8Ryz8ZKdrd38cQOe5CjU1bb1
uwgOyWexbPfeYcYikSEe99TxZm+Ib7/flvV4UzpsdeP0Ds0yidXWzvwazxNAFGiod3JwoL0C86rftOy2Vw6
N5sHNu+jeyD0r6qUfxhjqG/p4KpyW1hNs7C4KJMPXFrCz14+RJujx+pwJjU04uKnLx1i1bxcFk/QB2clTQBR
wBhDo71zwg5gbyLustCOniF+sKU1SNEpq+070Y2je5A1YdL84+3vaytIio/l/qdDtyz06cZjnOgasHzah4loAo
gC9rP9nO0bZskEHcDjLsvJ4n2XFvPTFw9xyDPZl4ps9S0OAFaXh34H8Hi29ET+9uoFPL/vFNuaHVaH8w7G
GB6uO0h5flpIdrBrAogCYzOATlQBNJG7ayuIjxXuD9PBNmp66po7qChIpzAzPKcG/+iVpczNTeHrT+1heNRl
dTjnean1NHuPd/HJ1fNCsnlNE0AUaGjvJCE2hopC36adzc9I4jPrF/CnPSfPVYeoyNQ/NMrrh86ETfXPRBLjY
vnyuxfReqqHX7x62OpwzvNwfRt5aYncvCI0F7bXBBAFGu1OKmelkxjn+2Ren7iqjJKcZO77wx5GQuyqSvnP
awdPMzTiYnUINk9Mx3VVBVy1II/vPNfC2d4hq8MBYP+JbuqaHXz0irnT+tsLJp8SgIhsEJH9ItIqIvdcYL/3iog
RkRqvbV/yHLdfRGqne041My6XodHuZMk0qw+S4t1XVftPdvPLMBpso6anvqWDhLgYLisL75W2RISv3lhF
98Aw33mu2epwAPe0D8nxsXzosrlWhzKpKROAiMQCDwEbgSrgNhGpmmC/dOBO4DWvbVXArUA1sAH4
oYjE+npONXOHTvfSPTjic/u/t9rqQi6fl8ODz+7H2adloZGovsXBZWU5lk717C8Vhel86LK5/OK1I+w/0W1pL
Ce7Bvj9znY+UFNMdmqCpbFciC93ACuBVmNMmzFmCHgMuHmC/b4OfBMY8Np2M/CYMWbQGHMQa
PWcz9dzqhlqPDcF9PRX/XKXhVbj7B/mu8+HxlWV8p/jzn6aT/awJgyrfyZz13ULSUuM4+tP7cEY60a0/+zlQ
4y4DB+/KnSmfZiILwmgCPBuA7B7tp0jIpcAJcaYp308dspzep37dhHZLiLbHY7QK/MKdbuOOkmMi6E8P+2
ijq+ancGtK+fw81cO03rK2qsq5V/1LZ7pHxaGbwfweNmpCXz+2nJebO3gub2nLImhd3CEX7x6mA3VhczN
9f8ayf40405gEYkBHgS+MPNw3skY87AxpsYYU2OzRc6VSrA0tndSPTtjRnO7f+G6hSQnxPL1p7QsNJLUNT
vlT0+kwsJFyQPhLy+fy4L8NO5/eg+DI6NBf/3Htx+la2CET4bgwK/xfPlWaAdKvB4Xe7aNSQcWA1tF5BBwO
fCkpyN4smOnOqfyg1GXYXd710U1/3jLTUvkzmvK2dbsYMs+a66qlH+Nugwvtnawutxm+bKE/hYfG8NXb6
zi0Ok+fvbSoaC+9sioi/9+8SA1c7O5ZE52UF/7YviSAN4AykWkTEQScHfqPjn2pDHGaYzJM8aUGmNKgVeB
m4wx2z373SoiiSJSBpQDr091TuUfBxw99A+PXlQH8HgfWVXKvLxUvv70HoZGtCw03O1ud9LZN8yaCGr+8
bZ2oY2rK/P5/gutOLoHg/a6f2w6gf1sP38dYpO+TWbKBGCMGQHuADYDe4HHjTFNInKfiNw0xbFNwOPA
HuCPwGeNMaOTnXNmb0WNt+uoewpofySAhLgYvnLjItocvfzvK4dmfD5lrfoWByJw1YLITAAAX75hEQPD
o3z72f1BeT1jDI/UtVGam8J1VQVBec2Z8mnpH2PMJmDTuG33TrLvunGP7wfu9+Wcyr8a252kJsRSlndxH
cDjra/lZ81CG997voU/W1FEblqiX86rgq+uuYPFszMj+v/hfFsaH72ilP9+6SB/efncgM/E+cahs+yyO/n6LYuJ
DcFpHyaiI4EjWIPdyeKiTL/9MrrLQhfRNzTKg3/SstBw1T0wzJtHzob19A+++ttryslOSeC+PwS+LPThujayU+J
53yXFAX0df9IEEKGGRlzsOd7ll+Yfbwvy0/nw5XP55etH2Hu8y6/nVsHxyoHTjLgMa8J8+gdfZCbH84XrF/L6
oTNsajwRsNc54Ojhub0n+fDlcy+45kao0QQQoZpPdjM04pp0CciZ+Py15WQkxwflqkr5X31LBykJsWFRpeI
Pt75rDpWF6fzrpr0MDAemLPS/XzxIQlwMH15VGpDzB4omgAh1bgRwANo9s1IS+MJ1C3ml7TSbm076/f
wqsOpaHKyal0tCXHT8+cfGuJePbO/s55G6Nr+fv6NnkN/ssPPeS4qwpYdXn0p0/AZEoQa7k4ykOObmpgT
k/LetnENFQTr3b9oTsKsq5X+HT/dy+HRfVDT/eLtifh4bqgv54dYDnHAOTH3ANPz8lcMMjrj4xFXhUfrpTRN
AhGqwd7K0OCtgg3ziPINtjp7p5ycvHQzIayj/Ozf9QxR0AI/3j+9exKjL8MAf9/ntnAPDo/z81cNcU5nPgoucb
sVKmgAi0MDwKPtPdPu0BORMXFWex3VVBTz0Qiunuvx7VaUCo67ZQXF2MmV5oT1HTSDMyU3hr1eX8
du32nnzyFm/nPM3b9o50zsUFtM+TEQTQATad6KbEZdhWYATAMCX372IoVEXD2wOzmAbdfGGR128cu
B0RE7/4KvPrF+ALT2R+/6wB5drZgUMLpfhx/UHWVqcGbbrKWgCiECNdvcI4EBUAI1XmpfKx68s44kddho
8r6tC086jnXQPjrA2Qqd/8EVaYhx311aw82gnv981s+nHntt7koMdvXxy9bywTaiaACLQLruT3NQEZgdpke
87rl5AXloCX9Oy0JBW3+wgNkZYNT96EwDAey8pZmlxJt94Zh+9gyMXfZ5H6tsoykpm4+JCP0YXXJoAIlCj3c
mS4sygXZWkJ8XzD7UV7Dh8lid3HQvKa6rp29bSwfKSLDKT460OxVIxMcI/vaeKk12D/GjbgYs6x1tHzvLGo
bN8/KqyGU21brXwjVxNqG9ohJZT3TOeAnq63ndpCdWzM/jGM/voH9Ky0FDT2TdEg70zKqt/JnLp3BxuW
jabh+vaOHqmb9rH/7j+IOlJcXzwXSVT7xzCNAFEmKZjXbhMYAaAXUhsjPBP76nmuHOA/6q7uKsqFTgvtnZ
gDFFX/38h92ysRAS+8cz0ykKPnO7jmd3H+dBlc0lL9Gk+zZClCSDCNNjH1gAObgIAWFmWww1LZ/GjbQc4
1tkf9NdXk6tv7iAjKS7oFwahbHZWMp9eO5+nG4/zWttpn4/7yUsHiRHho1eUBi64INEEEGEa7Z0UZiSRnx
GcDuDxvrSxEmOmf1WlAscYQ12LgysX5IV1e3UgfGrNfGZnJnHfU3sY9aEstLNviMe3H+Wm5bMpDFKRRS
Dpb0OEaWh3BnwA2IUUZ6dw+5p5PLnrGNsPnbEsDvW2A44ejjsHtPlnAskJsXxxYyVNx7r49fajU+7/i9eO0
Dc0yifDZMWvqWgCiCBdA8O0OXotv83/m3XzKcxI4mt+GGyjZm5bc/RO/+CLm5bNpmZuNt96dj/dA8OT7
jc4MsrPXj7E6vI8Fs3KCGKEgaMJIILs9swAauUdAEBKQhxf3FhBY7uT37xptzQW5V7+cZ4tleLswEwMGO5E
3LOFdvQM8YMXWifd7/c7j+HoHoyYq3/wMQGIyAYR2S8irSJyzwTPf1pEGkVkp4i8KCJVnu0f8mwb++cSk
eWe57Z6zjn2XL5/31r0aTzXARzcEtCJ3LysiOUlWTyweT89Mxhso2ZmcGSUV9tOs6Zcm38uZGlxFu+7tJifv
HSQgx2973jeGMOP69uoLEyPqDupKROAiMQCDwEbgSrgtrEveC+PGmOWGGOWAw8ADwIYY35hjFnu2f

5h4KAxZqfXcR8ae94Yc8ofbyiaNdidFGcnk5OaYHUo5wbbOLoH+eGWya+qVGBtP3SWgWEXa6J4+gdf3V
1bQUJsDPc/vfcdz21rdtB8siesp32YiC93ACuBVmNMmzFmCHgMuNl7B2OM99qAqcBEDb+3eY5VAdLQ3
mlJ+edkVszJ5s9XFPHj+oMcOT39wTZq5upaHMTHCpeV5VodSsjLz0jis1cv4Lm9J3nRM232mEfq2yjISOQ9
y2ZbFF1g+JIAigDv7nG7Z9t5ROSzInIA9x3A5yY4zweBX47b9lNP889XZZK0KiK3i8h2EdnucDh8CDc6ne0d4
uiZfpYUWd/84+3uDZXExgj/uumdV1Uq8OqaO6iZm0NqmA9YCpaPX1lGSU4y9z3VxMioC4CmY05eaj3NR
68oi7hV1Pz2bowxDxlj5gNfBL7i/ZyIXAb0GWN2e23+kDFmCbDa8+/Dk5z3YWNMjTGmxmbTdszJjC0BGY
wpoKejMDOJz6ybzx+bTvDygY6pD1B+c6p7gL3Hu1itzT8+S4qP5cvvrqL5ZA+Pvn4EcE/7kJoQy19cNsfi6Pz
PlwTQDnhPeFHs2TaZx4Bbxm27lXFX/8aYds9/u4FHcTc1qYs0NhVzdQiO9PzkmnkUZSVz3x98G2yj/GOsG
UM7gKentrqAVfNyefBPzew93sUfdh3jg++aE5GT6PmSAN4AykWkTEQScH+ZP+m9g4iUez28AWjxei4G+
ABe7f8iEicieZ6f44EbAe+7AzVNDXYnZXmpIflLmhQfyz++exH7TnTz2BtHrA4natS3dJCbmkBVhNSsB8tYW
WhX/zB/8cirGOBjV5ZaHVZATJkAjDEjwB3AZmAv8LgxpklE7hORmzy73SEiTSKyE7gL+CuvU6wBjhpj2ry2J
QKbRaQB2In7juKRmb+d6NXY7gypDuDx3r2kkJWlOXz72Wac/ZMPtlH+4XIZ6lscXFWeR0xM5FStBMuiW
RnctnIOZ/uG2bi4kJKcyBxD4VPPkDFmE7Bp3LZ7vX6+8wLHbgUuH7etF7h0OoGqyZ3qHuC4c4AIldj8M2b
squo9P3iR/3i+ha/eOL6SWPnT3hNddPQMafPPDHzh+gpOdQ/y+WvLp945TEVWl3aUCqUBYBeyuCiTD9a
U8D8vH+KAo8fqcCJanU7/MGM5qQk88pEaFuSnWx1KwGgCiAANdicxAtWzQ7+t9wvXV5AUHzvhYBvlP/
UtDioL0y2bFVaFB00AEaCx3cmC/LSwqPW2pSfyuWsW8MK+U2zdr4O/A6FvaITth87q7J9qSlGRAHYcPsO
f9py0OoyAMMbQYO8MuQFgF/LRK8oozU3h60/tYdgz2Eb5z2ttZxgadWn7v5pSVCSA77/Qyn1PNWFM5
NWgH3cO0NEzFNIVQOMlxMVwz8ZKDjh6eWGf3gX4W12Lg6T4GGpKs60ORYW4qEgAtdWFHD3Tz97j3
VaH4ndjS0BaPQX0dF1dWUBaYhxb9+v0Hv5W1+zgsrJckuJjrQ5FhbioSADXLipABDY3nbA6FL9rbO8kLkbC
brBPQlwMVy3IY+v+UxF5Z2aV9s5+Djh6tfpH+SQqEoAtPZGaudkRmQAa7E4WFqSH5dXeugobx50D7D8Z
eXdmVqlvdt9RrdUOYOWDqEgA4G4G2neiO6KmJXZ3AIf2COALWVfhXgNIm4H8p76lg8KMJBbkp1kdigoD
UZUAILKagY6e6cfZPxzyA8AmU5iZxKJZGWzRjmC/GHUZXmztYM3CvIhatEQFTtQkgJKcFBbNyoioBLDLM
wNouN4BgLsZaPvhs3RdYDFu5ZsGeyfO/mFWa/mn8lHUJACADdWF7DhyFkf3oNWh+EVju5OE2BgWFoT
vUPX1FfmMugwvtehaATNV19yBCFy1QDuAlW+iKgHULi7AGCJmUFiDvZNFs9LDepWiS+ZkkZ4UxxYdFTxj
9S0OlhZlkh0Ca0Kr8BC+3xwXoaIgnbm5KRHRDORyGXa3d4Vt+/+YuNgY1pTb2LrfoeWgM9A1MMxbRzu1
+UdNS1QlABGhtrqQlw90hH2bc1tHLz2DI2E3AGwi6ypsnOoeZM/xLqtDCVsvt55m1GV0/h81LVGVAMC9
3NvwqAn7ypPG9vDvAB6ztsL9paXloBevvsVBWmIcK+aE9x2hCq6oSwArSrKxpSfybFN49wM02J0kxceww
Bb+9d756UksLtJy0ItljKGuxcGq+bnEx0bdn7SaAZ9+W0Rkg4jsF5FWEblnguc/LSKNIrJTRF4UkSrP9lIR6fds3
ykiP/I65lLPMa0i8h8SpMLlmBjhuqoCtu4/xcDwaDBeMiAa7U4Wz84kLkL+4NdX5PPmkbM4+8K7ac4Kh0/
3cfRMP2t0+gc1TVN+e4hILPAQsBGoAm4b+4L38qgxZokxZjnwAPCg13MHjDHLPf8+7bX9P4FPAuWefxtm
8D6mpba6kN6hUV5qDc/Sw5FRF7uPOSOi/X/Muop8XMY9k6WanrHPTNv/1XT5cvm4Emg1xrQZY4aAx4
CbvXcwxnj33qUCFyznEJFZQIYx5lXjLv34X+CWaUU+A6vm5ZKeFBe21UCtjh4Ghl0R0f4/ZnlJFlkp8VoOehH
qmjuYk5PC3NxUq0NRYcaXBFAEHPV6bPdsO4+IfFZEDuC+A/ic11NlIvKWiGwTkdVe57RPdU7PeW8Xke0is
t3h8M/VYUJcDFdX5vPc3lOMhOGCJA1hsgbwdMTGCGvKbdQ1O3C5tBzUV0MjLl454J7+Qanp8lsDsjHmI
WPMfOCLwFc8m48Dc4wxK4C7gEdFZFrzFhtjHjbG1Bhjamw2/93i1lYXcqZ3iO2Hz/rtnMHSYO8kLTGOsgi7
4ltfaaOjZ4jdx5xWhxI23jpylt6hUa3/VxfFlwTQDpR4PS72bJvMY3iac4wxg8aY056fdwAHgIWe44uncU6/W
7vQRkJcTFg2AzXanSwuyiAmJrIm/FpTbkNEy0Gno67FQWyMsGp+rtWhqDDkSwJ4AygXkTIRSQBuBZ703k
FEyr0e3gC0eLbbPJ3IiMg83J29bcaY40CXiFzuqf75CPD7Gb+baUhNjGNNeR7PNp0MqxGoQyMu9h7vjqjm
nzG5aYksLc7SfoBpqG/p4JI5WWQkxVsdigpDUyYAY8wIcAewGdgLPG6MaRKR+0TkJs9ud4hIk4jsxN3U81
ee7WuABs/2J4BPG2POeJ77DPBjoBX3ncEz/npTvrq+upD2zn6ajoXPCNTmk90MjUZWB7C39RU2dh7t5Ez
vkNWhhLwzvUM0tju1+UddtDhfdjLGbAI2jdt2r9fPd05y3G+A30zy3HZgsc+RBsC1iwqI8SwVubgoPL5Qz00
BXRR5dwDgLgf97nMt1Lc4uHn5hHUByuPF1g6M0fJPdfEiYxTRRcpJTWBlWU5Y9QM02p1kJsdTkpNsdSgB
sbQok9zUBB0V7IO6ZgdZKfEsCZOLFxV6ojoBgLsaqPlkDwc7eq0OxSdjS0BG6opPMTHC2oU2tjU7GNVy0E
kZY6hvcXDlgjxiI6wYQAVP1CeA68NoqciB4VH2n+yO2Pb/MWsrbJztG6bB09yl3qnlVA8nuwZ1+gc1I1GfAI
qyklISlBkWCWDP8S5GXYYlEdr+P2ZNuY0YgS1aDjqpumb3Z6MdwGomoj4BgHuK6LeOdHKya8DqUC6o8
dwI4Mi+A8hOTWB5SRZbtRx0UnUtHSzIT2N2VmT2Bang0ASAux8A4NkQXyqywe4kLy2RWZlJVk2RrREAA
BpqSURBVIcScOsr8mmwOyNm/WZ/Ghge5bW206zRq381Q5oAgAX5aczLS+XZEG8GarB3RnQHsLf1lfnA
200d6m1vHDrD4IiL1Tr/j5ohTQC4l4q8vrqQVw6cDtn56HsHR2h19ERNyV/VrAzy0hJ1VPAE6podJMTGcH
mZTv+gZkYTgEdtdQEjLsML+0OzGajpWBfGRH77/5iYGGFdhY36lo6wnLE1kOpbOnhXWTbJCbFWh6LCnC
YAj2XFWRRkJPLH3aHZDDRWEhlJi8BMZX1FPs7+YXYe1XLQMSe7Bth3olurf5RfaALwiIkRrq8qZFuzg/6h0F
sqssHuZFZmEvnpkd8BPOaqcvcgJ20Gelt9i3sVO+0AVv6gCcBLbXUhA8OukFyWsLHdGTXt/2Myk+O5dE62
Tg/tpa7ZQV5aIpWF6VaHoiKAJgAvl83LITM5PuQGhTn7hznY0Rs17f/e1lXaaDrWFfJjNILB5TK82NrBmvK8i
FsLQllDE4CX+NgYrqnM5/m9pxgOoY7H3e2RtwSkr9YtdJeDbtO7AJqOdXGmd0jLP5XfaAIY5/rqQpz9w7x+
8MzUOwfJ2BrA0dYEBLBoVjoFGYlsbdZ+gLGmyasWaPu/8g9NAOOsXWgjKT60lopsbO+kJCeZ7NQEq0MJ
OhFhfUU+9c0dIXVXZoX6FgdVszKwpSdaHYqKEJoAxklOiGVNuY1nm07iCpHpiN1TQEdf88+YdRU2ugdH2
HH4rNWhWKbX8/518RflT5oAJlBbXciJrgEaPG3vVjrdM4j9bD9Lo7D5Z8yVC/KIi5GorgZ6te00w6NGp39W
fuVTAhCRDSKyX0RaReSeCZ7/tIg0ishOEXlRRKo8268TkR2e53aIyNVex2z1nHOn51++/97WzFyzKJ/YGAmJ

ZqBGTxKKpgFg46UnxfOu0pyonh20rtlBcnwsl5ZmWx2KiiBTJgARiQUeAjYCVcBtY1/wXh41xiwxxiwHHgAe
9GzvAN5jjFmCe6H4n4877kPGmOWefyHz152VksDl80JjqcixKaDDZc3iQFlXYWPfiW6OdfZbHYol6ls6uHxe
DolxOv2D8h9f7gBWAq3GmDZjzBDwGHCz9w7GmC6vh6mA8Wx/yxhzzLO9CUgWkbDowaqtLqTN0Uvrq
W5L49hldzLPlkpGUrylcVhtbHbQbVE4O+jRM320dfTq9A/K73xJAEXAUa/Hds+284jIZ0XkAO47gM9NcJ73
Am8aY7wneP+pp/nnqzLJHMcicruIbBeR7Q5H8P74r68aWyrS2snhGts7o7r9f0x5fhpFWclRuVj8uekftANY
+ZnfOoGNMQ8ZY+YDXwS+4v2ciFQD3wQ+5bX5Q56modWefx+e5LwPG2NqjDE1Nlvw/gAKM5NYVpJlaT
PQya4BTnYNsiSKK4DGiAhrK2y81NrB0Eh0lYPWNTuYnZnEfFuq1aGoCONLAmgHSrweF3u2TeYx4JaxByJS
DPwO+Igx5sDYdmNMu+e/3cCjuJuaQkptdQENdqdl7c7RsgSkr9ZX5NM7NMr2Q6EzSC/QRkZdvHSggzUL
bVGxEJAKLl8SwBtAuYiUiUgCcCvwpPcOIlLu9fAGoMWzPQt4GrjHGPOS1/5xIpLn+TkeuBHYPZM3Egjnloq
06C6gwd5JjED17AxLXj/UXDE/l4TYmKiaHXSXvZPugRFt/1cBMWUCMMaMAHcAm4G9wOPGmCYRuU9E
bvLsdoeINInITuAu3BU/eI5bANw7rtwzEdgsIg3ATtx3FI/49Z35wXxbGgvy0yzrB2hod1Ken05KQpwlrx9qU
hPjWFmWw5YoGg9Q19xBjMCVC3T1L+V/Pn2zGGM2AZvGbbvX6+c7JznuX4B/meS0l/oYo6Vqqwv40bY
2zvYOBXUqBmMMjXbnueoX5bauwsa/PL2Xo2f6KMlJsTqcgKtrcbC0OIuslOibBkQFno4EnkJtdSGjLsNze4
N7F3DMOcDp3iGWafv/ecYS4tYoKAd19g2z62inVv+ogNEEMIUlRZnMzkwKejNQw9GxJSC1AsjbvLxUSnK
S2RoF5aAvH+jAZdDpH1TAaAKYgohwfXUh9S0O+oZGgva6De1O4mJEV34aZ2x20JcPnGZgOPSW7vSnuhY
H6YlxLC/RiwAVGJoAfHB9dQGDI66gLkrSaHdSUZhOUrwO/R9vfUU+/cOjIbVmg78ZY6hr7uCKBbnExeqfq
QoM/c3ywcrSHLJTgrdUpDGGBntnVE8BfSGXz8slIS6yy0HbOnpp7+zX9n8VUJoAfBAXG8M1iwp4ft+poIxC
PXy6j66BER0ANonkhFhWzcuN6GUi6z2d3Gu0/l8FkCYAH9VWF9I9MMKrbacD/lpj6xBE4xKQvlpfYaOto5
dDHb1WhxIQdS0dlOamREWpq7KOJgAfrS7PIyUhNijNQI32ThLiYqjQDuBJravwlINGYDPQ4Mgorxw4rc0/
KuA0AfgoKT6WdRU2/rQn8EtF7rI7qZqVQbx2/k2qNC+VsrzUiBwPsOPwWfqHR3X6BxVw+g0zDbXVhZzq
HuQtT41+Ily6DE3tTm3/98G6ChuvHDhN/1BklYPWt3QQFyOsmq/TP6jA0gQwDesr84mPlYBODnewo4fe
oVFt//fBuop8BkdcQemXCaa6ZgeXzM0mLVHngFKBpQlgGjKS4lk1P4/NTScwJjDNQA2eKaCX6eCfKV1Wlk
NSfExE9QN09AzSdKyLtdr+r4JAE8A01VYXcOh0H80newJy/ga7k+T4WObb0gJy/kiSFB/LFfPz2LLfEbCEHG
wvtbpX/1qt0z+oINAEME3XVRUgQsCqgRrsnSwuyiA2Rhf/8MX6ChtHPGvmRoJtzQ6yU+JZPFubAFXgaQK
Ypvz0JC6Zkx2QBDAy6qLpWBdLirT5x1dvl4OGfzWQMYb6lg6uKrcRoxcAKgg0AVyE2uoCmo51cfRMn1/P
23yyh8ERF8tK9OrPVyU5Kcy3pUZEP8C+E904ugd19k8VNJoALsK5pSL3+HeK6MZ2zxTQWgE0Lesr8nmt7
Qy9g8GbrTUQ6lvcdzFa/6+CRRPARZibm0plYbrfm4Ea7E7SE+MozU3163kj3frKfIZGXbxyILzLQeuaO1hYkE
ZhZpLVoago4VMCEJENIrJfRFpF5J4Jnv+0iDR61vx9UUSqvJ77kue4/SJS6+s5Q9311YVsP3SG0z2DfjtnY7uT
JcWZ2v47TTWl2aQkxIb17KD9Q6O8fuiMTv6mgmrKBCAiscBDwEagCrjN+wve41FjzBJjzHLgAeBBz7FVwK
1ANbAB+KGIxPp4zpBWW12Ay+C3pSIHR0bZe7yLJToCeNoS42K5ckEeW8O4HPS1g6cZGnGxWuv/VRD5c
gewEmg1xrQZY4aAx4CbvXcwxnR5PUwFxv4KbwYeM8YMGmMOAq2e8015zlBXNSuD4uxkvy0Vuf9EN8
OjhqVaAXRR1lfk097ZT+upwIzPCLRnGk+QEBfDZWU5Voeioogv CaAIOOr12O7Zdh4R+ayIHMB9B/C5KY7
16Zye894uIttFZLvDETqlfiJCbXUhL7Z00OOHzsexEcA6B9DFWVfhvnIOx2agl1o7+NX2o9z2rhJdAU4Fld86g
Y0xDxlj5gNfBL7ix/M+bIypMcbU2GyhdXtcW13I0KjLLyWIDfZOslPiKc5O9kNk0Wd2VjIVBeIs2Rc6Fwm+6
Owb4guP72K+LZV7Ni6yOhwVZXxJAO1AidfjYs+2yTwG3DLFsdM9Z0i6dG42uakJfmkGarA7WVKchYh2AF
+sdZU2th8+Q/fAsNWh+MQYw5d/t5uOnkG+d+sKkhP06l8Fly8J4A2gXETKRCQBd6fuk947iEi518MbgBbP
z08Ct4pIooiUAeXA676cMxzExgjXVRWwZd8pBkcufkri/qFRWk71sFTr/2dk3cJ8hkcNL7WGRzno795q5+n
G49x1/UIW6/97ZYEpE4AxZgS4A9gM7AUeN8Y0ich9InKTZ7c7RKRJRHYCdwF/5Tm2CXgc2AP8EfisMWZ0
snP6+b0FRW11IT2DI7w8gy+dPce7GHUZrQCaoZpS9xTK4TAq+OiZPu79fRMrS3P41Jr5VoejopRPE44bYzY
Bm8Ztu9fr5zsvcOz9wP2+nDMcXbEgl7TEODY3nWB9Zf5FnaPB7h4BvKxYK4BmIj42htXlb5eDhmpz2qjLc
NfjOxHg2x9YphP/KcvoSOAZSox7e6nI0YtcKrLR7sSWnkhBRqKfo4s+6ypsnOgaYN+JbqtDmdSPth3gjUNnu
e+Wal30XVlKE4Af1FYXcrp3iB2Hz17U8Q3tTpYWZYbsFWs4GZsdNFTLQRvtTr7zp2ZuXDqLW5ZPWPmsV
NBoAvCDdRU2EmJjLmpuoJ7BEQ44eliqzT9+UZCRRNWsjJCcHrp/aJQ7f/UWtvRE7r9liSZ8ZTlNAH6QnhTPl
QtyL2qpyN3tTozRAWD+tK7Cxo7DZ3H2h1Y56P2b9tDm6OXb719GZkq81eEopQnAX2qrC7Gf7WfP8a6p
d/bS6BkBrGWA/rO+Mp9Rl+HFlg6rQznnhX0n+b9Xj/DJ1WVcsUDn+1ehQROAn1xbVUCMMO1BYQ3tTm
ZnJmFL1w5gf1lRkkVGUuiUg3b0DHL3Ew1UFqbz97UVVoej1DmaAPwkLy2Rmrk5PDvNfoAGe6e2//tZXG
wMqxfa2NrswHWRlVn+Yozhnt800DUwwndvXU5inI72VaFDE4AfXV9dwL4T3Rw+7dsC5c6+YQ6f7tMBY
AGwviIfR/fgtJvk/O2Xrx/lub2n+OKGSioLMyyNRanxNAH40dhSkb5WAzW26wyggbLWM6++lc1AbY4evv7
UHq5akMfHrii1LA6lJqMJwI9KclKompXhcz9Ag64BHDC29ESWFGWyxaJy0OFRF3/3q50kxMXwrfcv01XeV
EjSBOBntdWFvHnkLKe6B6bct+Gok7m5KWSlJAQhsuizvsLGW0fO0tk3FPTX/v7zLeyyO/m3P1+ia/yqkKUJ
wM9qFxdgDPxpz9R3AY3tTr36D6B1lfm4DNQFuRx0x+Ez/GBLK++9pJh3L5kV1NdWajo0AfhZRUE6c3NTp
mwG6ugZpL2zX9v/A2hZcRbZKfFs3Re8foCewRE+/6udFGUn8883hdUy1yoKaQLws7GlIl850EHXBRYmaT
y3BKSWgAZKbIywZqGNbUEsB/3ak020n+3nOx9YTnqSjvZVoU0TQADUVhcwPGrYcoErzwa7ExGonq2lgY
G0viKf071D5yquAumZxuP8eoedz65fQE2pLu6uQp8mgABYUZKNLT3xguWgje2dzMtL1avEAFuz0lZI4GcH
Pdk1wJd+18jS4kw+d0351AcoFQI0AQRAjGepyK37HQwMT7xUZIPdqc0/QZCTmsCy4qyAloO6XIa///UuB
oddfPeDy4mP1T8rFR58+k0VkQ0isl9EWkXkngmev0tE9ohIg4g8LyJzPdvXi8hOr38DInKL57mfichBr+eW+/
etWau2upC+odEJJyQ74RzgVPegdgAHyfqKfBrsnZzuGQzI+f/nlUPUt3TwlRsXMc+WFpDXUCoQpkwAlhILP

ARsBKqA20RkfHnDW0CNMWYp8ATwAIAxZosxZrkxZjlwNdAHPOt13D+MPW+M2TnztxM6Vs3LJT0pbsJ
moLElIDUBBMe6ChvGQF2L/+8Cmk9282/P7OOaynz+YuUcv59fqUDy5Q5gJdBqjGkzxgwBjwE3e+/g+aLv
8zx8FSie4DzvA57x2i+iJcTFcHVlPs/tPcnIqOu85xrbncQIVM3SBBAMS4oyyU1NYMs+/yaAwZFR7nxsJxlJcX
zzfUt1gRcVdnxJAEXAUa/Hds+2yXwCeGaC7bcCvxy37X5Ps9F3RCTi5kOurS7kbN8wbxw6f6nIBruThQXpJ
CfozJDBEBMjrF1oo67FcdHrNk/kwWeb2Xu8i2++dyl5aRH366uigF97q0TkL4Ea4N/HbZ8FLAE2e23+ElAJv
AvIAb44yTlvF5HtIrLd4Qi9Zf4uZO1CGwlx5y8VaYzxTAGtV//BtK4yn86+YXYe7fTL+V4+0MHD9W186LI5XL
OowC/nVCrYfEkA7UCJ1+Niz7bziMi1wJeBm4wx43vbPgD8zhhzbmSUMea4cRsEfoq7qekdjDEPG2NqjDE
1NpvNh3BDR2piHGvK8/jTnpPnloq0n+3nbN8wS7QCKKjWlOcRI/6ZHdTZN8wXHt9FWW4qX75hkR+iU8o
aviSAN4ByESkTkQTcTTlPeu8gIiuA/8L95T/RX9htjGv+8dwVIO6G01uA3dMPP/RdX11Ie2c/u9vd89KfmwJ
a5wAKqqyUBFbMyfbLYvFf/f1uHN2DfPfW5aQkxPkhOqWsMWUCMMaMAHfgbr7ZCzxujGkSkftE5CbPbv
8OpAG/9pR0nksQIlKK+w5i27hT/0JEGoFGIA/4lxm+l5B07aKxpSLdzUC77J3ExwqVs9Itjiz6rK+w0dju9Gm
m1sn8fmc7T+46xuevLddxHCrs+XT5YozZBGwat+1er5+vvcCxh5ig09gYc7XPUYaxnNQEVpblsLnpBH9fW0
Gj3UllYYYuDWiBdRX5fOvZZrbtd/D+mpKpDxjHfraPr/y/3dTMzeZv1i0IQIRKBZcOWQyC2upCWk71cMDR
454CWjuALVE9OwNbeiJbm6ffDDTqMnzh8V0YA9/54HJidYEXFQE0AQTB9Z6lIh/e1kb3wIi2/1tERFi30EZd
s+MdYzOm8kh9G68dPMM/31RNSU5KgCJUKrg0AQRBUVYyS4oyeeJNO6BTQFtpfWU+3QMjvHnE93LQ3
e1Ovv3sft69pJD3XnKhITBKhRdNAEFSW13AqMuQGBdDeYHOF2OVKxfkERsjPpeD9g+N8vlf7SQnNYH7b
1mio31VRNEEECS1nmagqtkZOlukhTKT47l0brbPs4N+45m9tJ7q4VvvX0Z2qq7drCKLfhMFyYL8NFaX57Fx
caHVoUS99RX57D3exQnnhctBt+w/xf+8cpiPX1nG6vLwGoSolC80AQSJiPDzT1zG7WvmWx1K1FtX4f4y39
Y8eTPQ6Z5B7n6igYUFady9oSJYoSkVVJoAVNSpLEynMCNp0tlBjTF86beNOPuG+d6tK0iK1zEbKjJpAlBRR0
RYX2njxdYOhkbeWQ76+PajPLvnJHdvqGDRLF2zWUUuTQAqKq1dmE/P4Ag7Dp8/Vfehjl6+9oc9XDE/l49f
WWZRdEoFhyYAFZWuXJBLfOz55aAjoy4+/6udxMUI3/7AMmJ0tK+KcJoAVFRKT4rnXaU5bPFKAD/Y0srO
o538658vYVZmsoXRKRUcmgBU1FpXYaP5ZA/tnf28eeQs33+hlT9fUcSNS2dbHZpSQaEJQEWt9RX5AGxq
OM7f/WonhRlJ/PPN1RZHpVTw6GoWKmotyE+jKCuZb/5xH6PG8KvbV5GRFG91WEoFjd4BqKglIqyrsDHi
MvzN2vmsLMuxOiSlgkrvAFRU+9iVpaQlxvH5axdaHYpSQacJQEW1BfnpfOndurC7ik4+NQGJyAYR2S8irSJ
yzwTP3yUie0SkQUSeF5G5Xs+NetYJHr9WcJmIvOY55688C84rpZQKkikTgIjEAg8BG4Eq4DYRqRq321tAjTF
mKfAE8IDXc/3GmOWefzd5bf8m8B1jzALgLPCJGbwPpZRS0+TLHcBKoNUY02aMGQIeA2723sEYs8UY0+d
5+CpQfKETintVjatxJwuA/wFumU7gSimlZsaXBFAEHPV6bPdsm8wngGe8HieJyHYReVVExr7kc4FOY8zIVO
cUkds9x293OKa/mLdSSqmJ+bUTWET+EqgB1nptnmuMaReRecALItIlOH09pzHmYeBhgJqaGuPPeJVSKpr
5cgfQDpR4PS72bDuPiFwLfBm4yRgzOLbdGNPu+W8bsBVYAZwGskRkLAFNeE6llFKB40sCeAMo91TtJAC3
Ak967yAiK4D/wv3lf8pre7aIJHp+zgOuBPYYYywywBXifZ9e/An4/0zejlFLKd1MmAE87/R3AZmAv8LgxpklE7
hORsaqefwfSgF+PK/dcBGwXkV24v/C/YYzZ43nui8BdItKKu0/gv/32rpRSSk1J3Bfj4UFEHMDhizw8D+jwYzj
hTj+Pt+lncT79PM4XCZ/HXGOMbfzGsEoAMyEi240xNVbHESr083ibfhbn08/jfJH8eehkcEopFaU0ASilVJSK
pgTwsNUBhBj9PN6mn8X59PM4X8R+HlHTB6CUUup80XQHoJRSyosmAKWUilJRkQCmWs8gWohIiYhs8a
zd0CQid1odUygQkVgReUtEnrI6FquJSJaIPCEi+0Rkr4issjomq4jI33n+TnaLyC9FJMnqmPwt4hOAj+sZRIsR4
AvGmCrgcuCzUfxZeLsT9yh3Bd8D/miMqQSWEaWfi4gUAZ/Dvc7JYiAW9zQ4ESXiEwA+rGcQLYwxx40xb3
p+7sb9x32hqb0jnogUAzcAP7Y6FquJSCawBs+0LMaYIWNMp7VRWSoOSPZMWpkCHLM4Hr+LhgQw3fU
MooKIlOKemfU1ayOx3HeBuwGX1YGEgDLAAfzU0yT2YxFJtTooK3hmMf4WcAQ4DjiNMc9aG5X/RUMCU
OOISBrwG+Dzxpguq+OxiojcCJwyxuywOpYQEQdcAvynMWYF0AtEZZ+ZiGTjbikoA2YDqZ71TiJKNCQAn9Y
ziBYiEo/7y/8XxpjfWh2Pxa4EbhKRQ7ibBq8Wkf+zNiRL2QG7MWbsrvAJ3AkhGl0LHDTGOIwxw8BvgSssjs
nvoiEBTLmeQbTwrMX838BeY8yDVsdjNWPMl4wxxcaYUty/Fy8YYyLuKs9XxpgTwFERqfBsugbYc4FDItkR
4HIRSfH83VxDBHaI+3VJyFBkjBkRkbH1DGKBnxhjmiwOyypXAh8GGkVkp2fbPxpjNlkYkwotfwv8wnOx1A
Z8zOJ4LGGMeU1EngDexF099xYROCWETgWhlFJRKhqagJRSSk1AE4BSSkUpTQBKKRWlNAEopVSU0gSglF
JRShOAUkpFKU0ASikVpf4/YHmTZ9Sa+OoAAAAASUVORK5CYII=\n"
        },
        "metadata": {
          "needs_background": "light"
        }
       }
      ]
     },
     {
      "cell_type": "code",
      "source": [
       "plt.pie(data['Diameter'].head(),autopct='%.3f')"
      ],
      "metadata": {
       "colab": {

```
      "base_uri": "https://localhost:8080/",
      "height": 508
     },
     "id": "3BMvAsyBKbyL",
     "outputId": "6cf89c7e-9163-4d1d-a8bc-75f66acae2ee"
    },
    "execution_count": 8,
    "outputs": [
     {
      "output_type": "execute_result",
      "data": {
       "text/plain": [
        "([<matplotlib.patches.Wedge at 0x7f39f1d66750>,\n",
        "  <matplotlib.patches.Wedge at 0x7f39f1d66f10>,\n",
        "  <matplotlib.patches.Wedge at 0x7f39f1cf27d0>,\n",
        "  <matplotlib.patches.Wedge at 0x7f39f1cfd110>,\n",
        "  <matplotlib.patches.Wedge at 0x7f39f1cfdc50>],\n",
        " [Text(0.8507215626110557, 0.6973326486753676, ''),\n",
        "  Text(-0.32611344931648134, 1.0505474849691026, ''),\n",
        "  Text(-1.0998053664078908, -0.02069193128747144, ''),\n",
        "  Text(-0.08269436219656089, -1.096887251480709, ''),\n",
        "  Text(0.9758446362287218, -0.5076684409569241, '')],\n",
        " [Text(0.46402994324239394, 0.3803632629138369, '21.856'),\n",
        "  Text(-0.17788006326353525, 0.5730259008922377, '15.868'),\n",
        "  Text(-0.5998938362224858, -0.011286507974984419, '25.150'),\n",
        "  Text(-0.045106015743578656, -0.5983021371712958, '21.856'),\n",
        "  Text(0.5322788924883937, -0.2769100587037768, '15.269')])"
       ]
      },
      "metadata": {},
      "execution_count": 8
     },
     {
      "output_type": "display_data",
      "data": {
       "text/plain": [
        "<Figure size 432x288 with 1 Axes>"
       ],
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAOcAAADnCAYAAADl9EEgAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAA
ALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6Ly
9tYXRwbG90bGliLm9yZy+WH4yJAAAgAElEQVR4nO3deXxU1f3/8dedJZN9spE9EAQhAwyiooKoaNylfl2q
trbVWO2ixp9VqzXWLmn92lKw2ipCFLdYtbVf61ZjrVUBEQQKsoyYyCJhCQFCCNmTydx7f3/coBGyZ2bOnZ
nzfDzmISZz7/0E8p5777lnUXRdR5Ik87GILkXJqSlSswSpJJyXBKkqnJcEqSSlswSpJJyXBKkqnJcE
wSpJJyXBKkqnJcEqSSlswSpJJyXBKkqnJcEqSSlswSpJJyXBKkqnJcEqSSlswSpJJyXBKkqnJcEqSSlsw
SpJJyXBKkqnJcEqSSlswSpJJyXBKkqnJcEqSSlswSpJJyXBKkqnJcEqSSlswSpJJyXBKkqnJcEqSSlswSpJJyXBKk
knJcEqSSclwSpJJyXBKkknJcEqSSclwSpJJ2UQXIA2g1DkacAOjgUQgocert/+PBzqB+u7XoaP+2/PPdcB2Shu
9wfuBpMFS5EJGJlHqTMAIoRuY2v2aAiQF+Mg+4HNgE7BJ1ZWN4zpfXF89d86+AB9XGoAMpwilThtwOn
AuMA0jiGMARWRZAJ26bcfEzufHAruA1cAq4N3quXM+FVtZ5JHhDJZSZyZwMXAJcD7gFFtQ77Zq2SvO9z
40q5dv7QT+BVQAH1TPndMW3MoijwxnIJU684CrgKuBGZjgzDiQF3znLvuF76bZA7ytA1gKvAX8X/XcOQc
CXlgEkuH0t1LnKOB7hFAge7rRe/fGD7STThjCJl0YIX0aeKd67hw1MJVFHhlOfyl1TgR+ClwHRAuuZlh0HX1K
59MtrcQkDHMXNcBzwDPVc+d84b/KIpMM50iVOs8E7gYuJcTOkkfr0Rg0UjqwBJhfPXfOO37YX0SS4RyO
UqcVuBLjTHma4Gr8ZquWs/J87/zT/bzb/wIPVM+d808/7zfsyU4IQ1HqjAVuBO4EjhNcjd+t0lxdAdjtKcCb+
SUV64H/BV6rnjtHnhEGQXbfG4xSp4VSZzHGs7/HCMNgAizRpgWyw8OJwD+ATfklFVcF8DhhQ17WDqTU
OR1YBEwXXUog+aExaKg+AG6rnjunMkjHCzkynH0pdTqBB4FbiIArDD82Bg1FF/An4LfVc+e0BPnYphf2v3T
DUur8DlAFFBMhf0e79IxaAYe1A/cAlfkIFdcIOL6pyQahnoxnlY9j9HmNKAFqDBqsXODl/JKKHwI/qJ47Z6fA
WkwjIs4KAyp1Oih1PoAxMiPiggkBbwwarPOADfklFVeLLsQM5D1nqTMXeI0wb/Dpj4DGoMF4GvhJ9dw5
raILESWyz5ylztnAOiI4mABebNUmCybATcC6/JKKE0UXIkrkhrPUeTvwHpAuuhTRduoZe0XX0IeJwKr8koo
```

7RBciQuQ1CJU6o4EyoEh0KWaxWnP5RNfQjyjgkfySimnAD6vnzhHZcBVUkXXmNMZXLkcG82tM0hg0kCL
g3/klFaFQq19ETjiN+8u1RPj95dF0HW215gqV7ojnACvzSyqC3VlCiMgIZ6nzFuT9Za9M2hjUHxfGfWjYjAbq
S/iHs9R5D7CQSLy/HoSdYnoGjVQ6sCS/pOIK0YUEUniHs9RZAswTXYaZmbwxqD8xwN/DOaDhG85S5/3A
70WXYXYh0hjUFxtGt79viC4kEMIynHcsHFeswwOi6zC7EGsM6osdeCW/pOJC0YX4W9iF013uvv39uNgFV
2dnrtBAE12PmYVgY1BfHMDr+SUVYdUvOqzC6S5334AxPpDPHVFnXJGT9bEKcqrGPoRoY1BfojGmQzlLd
CH+EjbhdJe7LwOeoscMeF9E2Wddmpu1pssY1CsdJYQbg/oSC7yVX1LhFl2IP4RFON3l7snAC4D16O/ttttn
zsnLXu8FuZLWUZZo05JF1xAACcA/80sqMkQXMlIhH053uTsJeB1j6bte1dpsp16Ul72pU6EjeJWZW5g0Bv
VlDMY9aEhO7n1ESlfTXe62AC8C4wd6b53NNv2CvJzP2hVFLsDDl41BfX6ghYEZGAMcQlZlhxP4DcaqXYNy
yGo96fy87K2tihKwyaRufKOd9PnNTFn41SFKl3aQ83Az08pamFbWwttbe78FfuTjTiYvbGHKwhau/UcbHT
5jILyu69z/fgcTHmvB9XgLj67uBKCxQ+fSv7ZxQlkLkxe28Oz6wV+5h1ljUF+K8ksq/p/oIoYrZMPpLndfDtw/1
O0ardYTzsvL2dFkURoDUBY3TLPzzvdij/n6nTOi2HBzPBtujueS4+3HfL+mSePRNV7W/jCOT2+NR9Xgb58aI
X5uQxe7m3Sqboujsjieb08xtn/8v14mpVnYeHM8S4ti+em7HXjVwc1sEYaNQX15OL+k4kzRRQxHSIbTXe4
uAJ5nmGuTtFgt7vPzcmoaLZbD/q0MzhpjIyVmeEum+DRo94FP02nrguwE459n0Vovv5rtwKlY+02PM76u
AM1eHV3XafFCSoyCbZD/oh9oJ4Zyz6ChsAEvheJQs5ALp7vc7cCYOXxED8/bLJZJ5+Vl7z9ksdT7p7L+LVjjZe
qiFm58o52G9mPPbjmJFu6eGcXoR5rJ+mMLzmi4YJzRV397g87Ln3Yx/ckWLn6xla31xqPb206NovKgRvbD
LbgXtfDni6K/DHB/dB1tjVYwzr8/oanlAo+KLmKoQi6cwC+BSf7YUYfFMvGCvOyGOqulzh/768st06PYfns8
G26OIyte4afvHtto3NCu88bnPnb8JJ69d8XT6oUXNhn3kJ0+nWgbrP1RPD88KYob3zS2//d2H9MyrOy9y7
hcvu1fHTR1DnxZGwGNQb25LtQ6yYdUON3l7qnAz/y5z06LZfyFeTkt+6zWff7cb08Z8RasFgWLovDDk6NY
U3Nsp6X3vvAxNsnCqDgLdqvClS4bK3cb78tNtHCly7jPvKLAxqb9xtef3dDFlS4biqIwPsXC2CQLVQcH7rEYIY
1BvXkiv6QiZMb0hkw43eVuK8Z0ice2poxQl6KMvTgvu3OPzVrj730D1DZ/FZjXKruYkn7sX/top8KqGpW2L
uMe8v0dKq40o0/F5QU2llQb7TfLdqpMSDW2H52o8P4O4+v7WzQ+r9c4Lnngy9oIagw62ijgCdFFDFbIzFv
rLnffDcwP5DGsur7njT21+hifL2+4+7j2H20srVY52KaTEafwm7MdLN2psmGfigLkJ1l44hvRZCVY2Nus8YM
3O3j7u0br7q+XdPDyZh82C5yYZeWpS6Nx2BQOd+h899V2djVqxEcplM2J5oRMK3ubNW54vZ3aFh1dh5I
zovje1KgBa/y+956NS7QTh7K0fLi5oXrunHLRRQwkJMLpLnePAzwYA2wDyqLrta/W1HaO6/LlB/pYIug62p
TOp9si8J6zpwZgfPXcOYdEF9KfULmsXUwQggmgKUrWlTlZsVVR9u3BOF6wRWhj0NGSgV+LLmIgpg+nu9
xdhDHrWtBoipJ+TXZm4qdRUVuDedxg2KlnBKzhK8Tcml9SMVF0Ef0xdTjd5e4o4Lcijq0ryqjvZGekfuKICqv
FXVdpk+TwOYONALdhjJSpwwn8CBgt6uC6oqQUZWVkr452bBZVg7+F+JxB/napmWdPMG2DkLvcHQNs
B7JE14KuNy/aX7fjjPaOqaJLGQnZGNSrjcBJ1XPnmG5KGzOfOW/FDMEEUJSEWzJGjXs/Nma96FJGQjYG9e
oETLo8hynD6S53xwP3iq7jaxQl7o70tIJ/xcWuE13KcFXrmZHaM2gg9+aXVAxvtEIAmTKcwE8wenOYi6LE/
GxU6pQ34uP+K7qU4YjgnkEDmQj8j+gijma6JQrc5W4n8FPRdfRJURy/SEs5oVNRVl3T3DJDdDlD4Y/GIF9T
HQcrHkZrPQwoxE+7kMTpl9Fa9RGNH71EV/1uMq9/GEfW8b1u3/Tf12nZ+C4oYB+VT9old6DYojhY8Qgd
uz/F4jB6S6VdcidRGcYsKh27NnHo/cWgqlhiE8n8ztyR/hi9uQd4IxA7Hi7ThRO4BeMhsXkpStQDqcnTOxVl
5XVNzaeLLmcw/DZMzGIl+ZybcGSOR+tso7b8DqLzTyQqbQyjrvg59f9e0OemvuaDNK37J9k3LcRid1D3+lx
aKz8k3n0eAMlnf5+4gjO+to3W0cKhdxeRfs1vsCWmo7b6fQjuEbPySypmVs+d83GgDjBUprqs7Z4T6GbRd
QyKotjmpSSdttiZuEJ0KYPhr8YgW3wKjkxjyiaLIxZ7ah5qcz32tDzsqbkD70BT0X1edE1F93VijU/p9+2tny0jZ
sLp2BKNwSTWuIA+CbonkDsfKlOFE5iDMXNaaFAU66PJzpkLkpzLRZcykEA0Bvka9+Pd/wWO7MF1tLElpJF
46hXULPo+exZch+KIJWbsSV9+//Dyv7D3mds49P5idJ/RV6LrUA1aRwv7Xiqh9rmf0PLp+/7+MXq6LL+kYkI
gDzAUZgtnsegChkxRLE8kJZ7xUErSh6JL6Y+/G4M0bzt1r/2OlHN/+OV94kDUjhbatq4m5+anyS1+Hr2rk5b
NSwBIml1E9g/KyLr+EbSOZhpXv2JspKt4920j/apS0q/5LY0r/0bXoYCM7AMjD6aZEMw04XSXu8cAF4iuY1
gURSl3Jp71YGryMtGl9MWfPYN01Ufda78jbtLZxE4c/C13R/UGbM4MrLFOFKuN2Akz6awxekfa4lNQFAXF
ZifefR7e2i0AWBPSiBl7EpaoaKyxThy5U/Ae2OGvH6U3384vqTBFW4xpwonxINh0z5qG4m+JCbN/mZayV
HQdR/PnnEG6rlP/rz9jT80j8dShzfphSxyFd+/naF0d6LpOx86N2FONobO+lkNf7r9tyyrsacbdTez4GXTWbE
bXVLSuDry1nw/u3nb40gBTrFhmiu577nK3AmwDwmIG8gtbWpc9VFc/W3QdR3Tq9u0TO8v9Es6OPZvZ/
+K92EflQ/dkYslnXY+udnHoP0+gtjdiccQTlT6WjG89gK+5nvp3HiXj6t8AcHj5i7RWLUexWIjKGEfqRbej2Ozs
++vP0doaAZ2o9ONIubAYS5QxSrBx9T9o9bwHikL81AtJPOUyf/wo/flb9dw51wb6IAMxSzhnA0tF1+FPZ7e
2LX3swMGzRdcB8LmWu+JC77xZousIIW1ARvXcOQGbfHwwzHJZ+y3RBfjb0rjYs3+UOcoU96CyZ9CQxQJX
ii7CLOG8WHQBgfBxTMzsoqz0ZToIvTwJ09XEAu27ogsQHs7u2dvzRdcRKJ9ER8++NjvjI1EB7V5NLJImkPaX
c/NLKvrvIRFgwsNJmJ41e9rscJx5VXbmCg2CPmbQi31HG9FxwT5uGLAChSILkOEMki2OqDMuz8la5YOg3v
9VyzmDRuI8kQcXGk53uTsOOEtkDcG0I8p++qW5WWu7IGjz+MjGoBEROoWJ6DPnOYBDcA1Btcdun3FJX
vZ6L3QG43iyMWhExueXVAjr6y06nBFxSXu0fTbbqRfm5Xg6FY5d0ciPZGOQXwi7tBUdTqHX9CIdtFmnn5+
XU9muKG2BOoZsDPILYZe2wsLZfb/Z+3D5CNFgtZ54Xl721hZFaQ7E/mVjkF8EdULznkSeOd2EeEd3f2iyWk
84f3TOziaL0ujvfa/SXMeuNSgNVaaoZQNFhjOk54D1pxaLZcr5eTk1jRaLX+fgWBI5S8sHmlvEQWU4TaLNY
pl0Xl72/kMWS70/9heBS8sH0hQRBxUZzkheH7JXHRbLxAvyshsOWK0HRrov2RjkVxF35hTyA5tdp8Uy/qK
87NZaq3VEc/7IxiC/ipwzZ/eUJE4Rxw4FXYoy9pK8bO8em3XYk+Ws0ibJnkH+M1nEjPCizpzyrDkAn6KM+U
Zutl5ts+0azvayZ5BfxSNg5JSocIbO9JcCqYqSe1luln2b3T6kGa1kY1BABP13VlQ40wQdN+RoipL1zZzMuMo
o+/bBbiMbgwIi6M86RYXTfIsUmZimKOnfys50eqKitgzm/bIxKCAiJpzyzDlEuqKkfTc7Y9Q6h6NyoPfKxqCAi
JhwyjPnMOiKknxDVnr26mjH5v7eJxuDAiJiwinPnMOlKM4fZKaPXh4Tvam3b8vGoICJmHDKM+dIKErCrR

mjxr0fG7P+6G/JxqCAiZhwyjPnSClK3B3paQX/iotd1/PLsjEoYII+E1/QF2zpHsdp98e+vPVeahbX4Gsy2j+Sz0
4m7YI09r+2n4ZlDdgSjB8v46oMEk5IOGb7PU/voXlDM7ZEG8c/+NXQ0v62r3urjoYPG8ACWd/NIsF97H6D
RlFifjYqdUqnoqy5vKX1VJCNQQHkl9/ZoRCxmpLfukEpVoXMb2cSkx+D2q6yvXQ78ZON9WHTLkwj7eL+T9
DJZySTem4qexbvOeZ7vW3fUdNB4+pGxj84Ht9hHzvm7WDCHyagWAQOS1UUxy/TUk7sVJRV32pumSEb
gwLGGuwDmmKps+GyJ9mxJxkfaNYYK45sB76GwZ844ibG4a3zDvr9zeubcZ7mxGK3EDUqCkeGg/Yv2okd
P7j1KQNGUez/m5o8vV1RVqw5UDBNbDFhK+hZERHOgMx87q3z0rGzg5hxMbRubaX+vXoaVjQQMzaGr
G9nYY0b2gdfb9t3NXQRO+6rINqSbXQ1BG2Wy/4piq19RaL3dqfV44uKNs3qzOFCB7/PVDGQsAin2qGya8
EuMr+TiTXGSmphKumXGY1rB149QO3fasm9afBrOo50exFu/Le67OzN+jltMY/sWnXqr+woisCb4fCjgF9n
qRgMEa21fp2vVffp7F6wm6SZSTinG6PQbE4bikVBsSgkz06m/Yv2Ie2zr+3tyXa6Dn11pvQ1+LAnB72d4BjF
XqYuv+gTfTZAbPuB0fk7394ouqYwFPRLpKCH01PkUfHTD6rrOjXP1ODIcpB20VeNN12Hv9p90ydNROdED
2m/fW2fcGICjasb0bo0vHVeOvd3EnNczAh/ipG5dJW24oqV+tfW3jyu+u0zotsPrhJVU5gafOOEn4hqEGrH
D03TbVvbOLzyMI5cB9t+uQ0wHnscXnWYjt3GfM1RaVFk35ANQFdDFzXP1pB/Vz4AuxftprWqFV+Lj6o7q
0i/PJ2U2Snse3lfr9tH50STeEoiW3++FcWqkH1dttCW2nPXa6u/t0Q7TenlQ3b6J/MmfHT63P0olgwRtYWh
oJ85haxs7S537wPkL80IzNqsrb39TW2qAlF9vWdf+vS1n036/vRg1hXGlheXFQZ1XR9RPYQOCjpuWDhpq7
bx9je1yf0FEyDzwNrpzsPbPgxWXWFuWDNSjISocO4WdNyQN3mntvneV7TjFBjUze60TQtOsWhdgx6oLf
UpYsK5U9BxQ9q4vfqWX72k5Sgw6MckVq0rZtqGR73oukkeyIasoP/Oigpn0D+FQt3oA/oXDz6vJisw5Fnck
5q+cGXuX7MyEHVFEBlO6ViZh/Tdf3hGjbHowx9q56r6y5m2rtZex4BKgyLDKX1daqNe+/BiFatO1kj2o6Bb
pn8yLwVdb/JXbREmYsIp7zkHwdmi1z36hNph08jzx/5i2w/mjq1+S549h66+uKwwYOuo9kVUOGsAuTxdP
+Lb9cMLFqkNdpWx/tzv2J3vnBHTXvexP/cZAYScTISE01Pk8SEfp/QpplNvXrBQrXH4CMjokunr5hega3LGh
MGLnHB2WzfwWyJPVJfevmCh+kWsl8mBOobd15o8+bPnahDRPSw0DWnGfX8RGU7ZMfsoNlX3PrZI3Zz
QEfjlETPq1p2c1LhteaCPEyZWizioyHDK+54eLJru+9MT6vrkVoLWF/aETQtOtaiy99AgLBNxUNGXtbLXCqD
ouvbQU+rq9EZOC+ZxrZovetrGP3eh60EfDhVCthSXFe4XcWBh4fQUeToAOShY1/XfPaeuyK1n1sBv9r+kph
0FWftWyd5DfRNy1gTxE3ytguBdxpnRr1/SPhy3j9kiayj4/MWz6tKmbvTZ44Z9r/vC0vl8unMVCTFJ3H/N0
wBUrC1nZWUF8TFGj8P/OfUmJo/++sVBQ8sBnl8yl+a2BlAUZrnmcI77m19+f+mnr7F88xsoioUpo0/j8hk/x
qd28dcPH2HXwS1YUPjmrGImZAdsXrOIDefHwG2CaxDm7lfUZZN36UKDCUbvoVPWzUv9+LTSJhQlcTj7m
DHhQmZPvoznl/zha18/Z+pVnHfCNX1uZ1GsXDnjZvJGTaDD28YfXr2ZgtyTyUrOZ0vNejzVKym56kns1iia2
xsAWFFZAcD9Vz9Fc3sDC9++j3uuXIhFCciFoLBwirznhAhuFLr1LXXpqVvFB/OImI6DucfteNMz3O3HZ08lN
nrouXbGpZI3ynicGx0VS2bSGA63GsN9l3/2T86f9m3sVmPYakKMMSXvvoadTMw58cuvxUTFs6tuUKsjDt
WO4rLCYyc1DhKh4fQUeXYAW0XWIMIN/1GXne3RzxZdx9Hyd707K6btgF8/MD/89HV+938/4IWl82nrb
O73vfXN+9hTv438dBcABxr3sL3Ww/zXivnTm3ey80AVADmp4/DsXImqqRxsqmX3wS00tBzwZ9lHCDtrgv
gzJ8A/RBcQTFcvV5dfvFYP6nQXQzH9k/kudK3WH/s6c9KllF77F0quepLE2BRe/bisz/d2drXz1LulfHPmrcRE
GeswaZpKa2czd1++gMtn/Jhn3nsAXdeZWXAxSXGjmPfqLfxj5ULGZkwO1CWt0FkkzBDOV0QXECxz1mgrr
/pIn6X4cUkKf7P72pKmfPZMrT96DyXGpmCxWLEoFma55nx55juaqvpY/G4p048/l2nHnfnl15PiRjFt7Bkoi
kJ+egGKotDS0YjVYuWbp9/KfVc9yY8veoB2bwvpSQGZV3hpIHY6WMLD6SnyrAOqRdcRaOds1NZc/752a
m8z5ZlNet36k5IObxnxWaOxtf7LP2/c8RFZKfnHvEfXdV5c9hCZSaM5d+rVX/ve1LGz2LJ3AwD7D+/Gp/qlj
3bi7eqgs8uYS7hyz1osipWs5GP3PUJri8sKhXTbO0LI7HtHc5e7HwJ+KrqOQJlZqa2743VtigIO0bUMlmqxdS
yfNX+3Zo06fuB3w7Pv/S9bazfS0tFIYkwyl0wvYuvejeyp344CpCRkcu2Zd+KMS+Vw60FeWvZHbr3k92yv9f
DIm3eQnTIWpfvS9MgjF5/axYtL57OnfjtWq40rZtzMxJwTqW/ex+MV96IoFpLi0vju7LtJSfD7ZI63FZcVPu7
vnQ6FWcI5EwjLB+HTtmub7vu7Nl4BwasdDV1Twpgta0+6Jx9F6XeWvzDUCWQXlxUeElmEWS6xVmGM8
Qwrrl36Z/f9XcsPxWACJDbvnJBVuzISH3e9KTqYYJJweoo8OvCq6Dr8aVytvrX0RTVLgWE91DeLgi1/PdPub
dkguo4ge050AWCScHZ7XnQB/pJbp+94sFxNUiDkF7LtnntoFLoe9CXwBKkF/i26CDBROD1FnrXAGtF1jFTG
IX3P/KfV6JHMlGc2MR31OeO+eH2z6DqC5IXiskJTTKFjmnB2E9o6NlKpTfq+Rxar6khnyjOjMbvfOz22bV9Y
Ntod5VnRBRxhtnC+TIiuo5LYqtf/uUxttWmMEV1LoJz8yUOT0dW9ousIoDXFZYWVoos4wlTh9BR5OoG++
3iZVFy73rhgkXowSmWc6FoCye5rd07Z/PT+MJ576GnRBfRkqnB2ewzoEF3EYEV79ZYFi9Td0V1MFF1LMK
Qf3HhicsPn4bhyWQ1QLrqInkwXTk+R5wAm+0vqS/dMedviOpkiupZgOsGzaIZF9YbbaKK5xWWFnaKL6M
l04ez2EKCJLqI/NlX3Plqmbk5sJ2BD8M3KovscJ214BHTdVL/MI7AXWCy6iKOZMpyeIs82TPzc06Lp6sNPqp
+ktETuFCuJzbuOz977UbhMbzrPbGdNMGk4u90PtIou4hi6rs97Rl2VeZgZoksRbeLWv51l9zavF13HCO0Bn
hBdRG9MG05PkWcvME90HUd78Hl1+eg6MTPlmY0CyvR18zJDvPfQr4rLCk3ZAGnacHZ7COOTzRR+8Vd1
2fF7Me0sBiLEdB7KGr/91VDtPeTBxI2Ppg6np8jThnF5K9xdr6rLplabZ0IuMxm954PTY1trQ7H30L3FZYWm
bXg0dTi7/QXBix79+G116YzPZTD7c/Inf5ysaGooDfv7oLis8F+ii+iP6cPZPZzsLlHHv+599cNzN5pvpjyzsavtzi
mbn6pD1017JuqhFfix6ClGYvpwAniKPB9i9LsNqitXaB99Y41+5sDvlABG1W+altJQGQq9h35WXFa4TXQR
AwmJcHa7FeNhcVBctFb7+FsfajPNPFOeGU31lJ1uUTs/F11HP/4DLBJdxGCYYg6hwXKXuy8A3iHAgZnt0f5
761vaNAXsgTxObVcX99XWclD1oQDXJCVxXXIK7zQ38fjBg3zh9fLymDFMiY7pdfvyQ4d4pfEwCjDB4eDBz
CwcFgs/r93Lf9vbibcYn72/y8zCFR0NwJq2Vn5/4AA+XSfZauX50f4fRNMUn7d17cn35qEo0X7f+cgcBtwiZ3
EfipAKJ4C73P0o8P8Ctf/TqrRP7npNm6RAwH+x6nw+6nw+JkVH06qpXFVdzWM5uSiARYHSffu4Jz2913D
u7+rie7t38c/8sURbLNy5t4az4uK4wpnEz2v3Mjs+ngsTvj5DSpOq8p1dO3kyN49su516n49UW2CWy/n8+
GuW1eTMNlsj2vXFZYV/EV3EYIXSZe0RPwM+C8SOp36hee56TZsYjGACjLLZmNR9RouzWDnO4eCAz8c4h

4OxUQPPoqnqOh26jk/X6dA00m39n+grmpo4Pz6BbLvxvkAFE2DC1r+fZfc2fRKwAwzdq6EUTAjBcHav6/k
9wK8Lvk7crVfe/7I2WoE4f+53sGq6vFR2dDA1enCfCxl2O99PSeHc7duYvX0b8RYrs+K+Kv3PdQe5fMcO5h
7Yj1czGlCru7w0aSpFu3ZyVfUO3mgMXMceBZRT1s3LQtcPB+wgg3eAEGidPVrIhQK7HBAAAAcCSURBVB
PAU+RZD/zKX/sbu0/f9psX1AwFnP7a51C0aho/qanhvvQM4q3WQW3TqKp80NLCf44bx9Jx42nXNd7sDt
udo9KpGDuWv48ZQ6Oq8tQhY5ZHVdfZ3NHBotw8Fufmsaj+INXewC1qHd3ZkHX8tv8zw8wCPyouKwy5
GTZCMpzd5gPvjXQnOQf1nb9/Tk20QIofahqyLl3njpoavpHo5PyEhEFv93FbKzl2Oyk2G3ZF4fz4BDZ0GEsU
jLLZUBSFKIuFK5xOPN1fz7DZmRUXR6zFQrLNxvTYWKo6A9utNK9m2cy4lr0rAnqQ/j1RXFb4hsDjD1vIhtN
T5NGAq4FhfzKnH9ZrHnpKtVl00v1X2eDpus4v99VynCOKG1KG9tmQZbOzsb2ddk1D13VWtbVyXJQxMX
udz/fl/t9vaeF4h3H/Whgfzyft7fh0nXZNY1N7O+MGcW87Uiev/6Nb0VQRLaTvEMKLM4dca+3R3OXusRgz
xg8pYMnN+oHHF6rtIifkWtfWxnW7dzEhyoHS/XDojrRRdOk6Dx7YzyFVJdFiocARzeK8PA74uvjlvn08kZsH
wGMH63inuRkr4IqO5oGMTKIsFr6/exeHfCo6OgWOaH6dmUlc92OVpw/V81pjIxbgKmcS1w/xQ2G4DqZ
M3rjJfYv7ywVRAm89cFZxWWFLkI7ndyEfTgB3ufs0YAnQ+wPBoyS06YcWPa4eivIxPrCVST1tdN+ytD51ytl
BONQuYEZxWaFf1hkVJWQva3vyFHlWA9cDA37SxHbojY8vVPfLYAaf+9MnT7eonb0v0uk/h4GLQz2YECb
hBPAUeV4B7uvvPQ6v3vr4QnVXdBeuIJUl9WDR1aiT1z9sR9cD1QrlBa4sLisMyHPwYAubcAJ4ijx/oI+Jmu
w+vWPBInVLXCfuIJcl9ZDQsmdcbs3SQC27cWNxWeGSAO076MIqnN1uAf7a8wtWVe/6c5m6ydnGiYJqk
no4ftsrZ0Z1Nvp7jO4vissKX/TzPoUKu3B6ijwqcB3wAhgz5f1xsbo2rZlTxVYmHdE991Auuu6vNTDnFZcVPu
infZlG2lUTvgxokaLrz/7hWfXj7AZmiq5J+rpo7+GMCVv/vmWEu9GBO4rLCu/1R01mExaPUvpSWeBSMJZ3
KBZdi9S7NdPv+6glPveMYWzqxRhlEvRB+MES1uE8orLA9Vvgl6LrkI7lszqal8+af1i3WPOGsFkTcHk4Nf70Ji
wva4/mqqr8FXA7YIpFUaWv2NTOhKmfljUMYe6hWoyeP2EdTIiQcAK4qiofAy4C/NUIIflJ6qHPpqbWe5YP
4q1bgNOLywo3BromM4iYcAK4qirfA6YDm0TXIn2de/Pi062+jv4GMawGZhWXFVYHqSThIiqcAK6qyh3AT
ATM5if1zaJr9pPX/9GBrrf38u1yoDAUx2SOREQ0CPWlssB1D/B7YHAjnKWA2zruyg935517ZMmLZuCWc
OtcMFgRHU6AygLXOcCzIG7omPR1H818cK3XkQRwbSjMLxsoEXdZezRXVeUSwI1Jl4GLQOrJ6x9+C6PhJ2
KDCfLM+TWVBa7zgaeA0aJriVBbgSJXVeXHogsxg4g/c/bkqqr8D8ZZ9CnRtUSYLozlHqfJYH5Fnjn70H0W/R
MwSXQtYe5t4E5XVeVI+9mGHRnOflQWuKzATcBvgEzB5YSbzzFCaepl+ESS4RyEygJXPHB390vIpNNhpBHj
w26Bq6qyS3QxZibDOQSVBa4sjF+sG5HPRoeqEVgIPOKqqqwTXUwokOEchsoC13HATzBCGi+4HLOrxbh3
L3NVVTaJLiaUyHCOQGWBywn8CGPVs6EMeYoE2zBm5S93VVV2ii4mFMlw+kFlgcuGMfv8ncApgssRyQe
8CzwDvO6qqpRD9EZAhtPPKgtcJwDXAt8C8sVWEzQbgeeBF11VlftFFxMuZDgDqLLANRMjqFcTfo9i9gEvA
c+7qiojYnxlsMlwBkH389KzgUu7/zsVUASWNBxeYAXGZeu/gQ2uqkr5yxNAMpwCVBa4UoHZGEE9B5iM+
cKqA1XAfzACudRVVdkqtqTIIsNpApUFrlHADIyQTup+FRC8Dg+tGLNDbOzx8riqKkN2ha5wIMNpUt3Teo7
mq6DmABndr3QgqfuVyLFnXbXHywfUYTxvPPLa1+PP24HtrqrKwU6wJQWJDGeI6w6xg+4wypCFDxlOSTI
pOZ5TkkxKhlOSTEqGU5JMSoZTkkxKhlOSTEqGU5JMSoZTkkxKhlOSTEqGU5JMSoZTkkxKhlOSTEqGU5JM
SoZTkkxKhlOSTEqGU5JMSoZTkkxKhlOSTEqGU5JMSoZTkkxKhlOSTEqGU5JMSoZTkkxKhlOSTEqGU5JMSo
ZTkkxKhlOSTEqGU5JM6v8DmrMXmE3RHNIAAAAASUVORK5CYII=\n"
        },
        "metadata": {}
       }
      ]
     },
     {
      "cell_type": "code",
      "source": [
       "sns.distplot(data['Diameter'].head(300))"
      ],
      "metadata": {
       "colab": {
        "base_uri": "https://localhost:8080/",
        "height": 296
       },
       "id": "XNw2a-MhKfj3",
       "outputId": "ad16736b-1de9-4bf3-83ca-c25ce6572769"
      },
      "execution_count": 9,
      "outputs": [
       {
        "output_type": "execute_result",
        "data": {
         "text/plain": [

```
        "<matplotlib.axes._subplots.AxesSubplot at 0x7f39f1d19290>"
       ]
      },
      "metadata": {},
      "execution_count": 9
     },
     {
      "output_type": "display_data",
      "data": {
       "text/plain": [
        "<Figure size 432x288 with 1 Axes>"
       ],
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAXwAAAEGCAYAAABmXi5tAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAgAElEQVR4nO3dd5xcdb3/8ddnZnvvvWU3m0ZI3RASSCjSRCR4Q
WkWFI3w89rl6rWj12u7F1DEhyJSFCNcQBEQRAgBQnpCet2W3WQ3yfbeZ76/P2aDawzZSbJnzpmZz/Px2
Ee2nMx5Z7L73jPf8z3fI8YYlFJKhT6X3dKWlVIqTETYHWsjIwMU
1JSYncMpZQKGlu2bGkxxmT6s62jCr+kpITNmzfbHUMppYKGiNT5u60O6SilVjVJjQwldKqTCha+UumFCC18pcnNSVtkqps7NiQ/1ZP8YtC4smIIlyIj3CV0qpMK
GFr5RSYUILXymlwoQWvlJKhNa+EopFSa08JVSKkxo4SulVJjQwldKqTChha+UUmFCC18ppcKE
1r4SoWZYY+Xzv5hRrxeu6OoAIuwO4BSynoDwx7W17Sy43AnR7sGAHCLkJ8ay+KydGbmJ+MSsTmlspoW
vlIhbvuhDl7YeYTewRGK0+O4bHoW8dERtPcOs+dIF09sOkRxTSs3LygiKTbS7rjKQlr4SoUoj9fwwo5GNtS2
UZgay0fPL6YwLe6ftrninGy21nfw3PYGHlhVxSeXlNqUVgWC5WP4IuIWka0i8oLV+1JK+Yx4vKzYWM+G2j
aWlGewfGnZv5Q9gEuE+cWp3HnxZLzAw2tqaejoD3xgFRCBOGn7eWBvAPajlMJ3ZP/HjfXsPdLFNbNyee/
MXNyuU4/P5yTF8PHFJQyOeLjj91sYGtETuqHI0sIXkQLgfcBDVu5HKeVjjOG57Q3sPdrN+2fnsbgsw++/m5
cSy/XzCtjZ0Mn//n2/hSmVXaw+wr8P+A/gXQ8XRGS5iGwWkc3Nzc0Wx1EqtK2tbmXTwXYumpLJotL00/7
75+Qlc8vCln79Zg1b6totSKjsZFnhi8g1QJMxZsuptjPGPGiMqTDGVGRmZloVR6mQt6GmlZd2HWF6bhKXz
8g+48f5xtXTyU6K5rvP7cbjNROYUNnNyiP8C4BrReQg8ARwqYg8buH+lApb7b1DfO6JraTGRfHB+QVnNac
+PjqCr189nZ0NnTy1+dAEplR2s6zwjTH/aYwpMMaUADcBrxljPmzV/pQKV8YYvvrMDtp6h7j5vCJiIt1n/ZjX
zs5jfnEq971ayeClZwJSKifQpRWUCnJ/eruBv+85xn9cOY28lNgJeUwR4YuXTeFo1wD/t0mP8kNFQArfGPO
6MeaaQOxLqXDS0jPI9/+6h4riVG6/cNKEPvYFk9OZX5zKA6uq9Sg/ROgRvlJB7LvP7aZv0MOPrp+Fa5y59q
dLRPjce8o52jXA89uPTOhjK3to4SsVpF7dc4wXdhzhs5dOZnJWgiX7WFqeQXlWAo+sqcUYnbET7HQtHaW
CUPfAMN/6yy6mZify6YvKJvSxV2yo/6ePZ+Ql8Zdtjfz3i/uYlBHv12PcsrBoQjOpiaFH+EoFoZ+vrORo1wA/u
v5coiKs/TGeW5hKbKSbdTWtlu5HWU8LX6kgU9XUwyNrDnJjRSFzi1It319UhIt5RSnsbeyid3DE8v0p62jhK
xVEjDF8/4U9xEa5+cqVUwO23/klaXiMYduhjoDtU008LXylgshr+5p440Azn39PORkJ0QHbb05SDAWpsWy
pa9eTt0FMC1+pIDE44uH7L+yhLDOejy0uCfj+5xencrRrQNfLD2Ja+EoFid+vq+Ngax/ffv85RLoD/6M7Kz8Ft
wjbdVgnaGnhKxUEOvuH+cWqKpZOyeSiKfasKhsb5WZKdgI7Gzrx6rBOUNLCVyoI/PqNajr6hvnqVYE7UXs
yswpT6BoY4WBLr6051JnRwlfK4Y51DfDwmlqWzcnjnLxkW7NMz0ki0i1sP9xpaw51ZrTwlXK4+16txOM1f
Plye4/uwTcnf3puEnsadVgnGOnSCko5xIlLGgA0dQ/w5KZ6Fpam81ZVC1TZEOwE03OT2HG4k0NtfRSn+7f
UgnIGPcJXysFe2XOMCLeLS6Zm2R3lHVOzE3GLsOdIl91R1GnSwlfKoerb+tjd2MWS8gwSop3zYjwm0k1pZ
jx7tfCDjha+Ug5kjOHl3UeJj47gwskZdsf5F9Nzk2jpGaKpe8DuKOo0aOEr5UA1Lb3UtvRyydRMoiPO/h61E
216bhIAexv1KD+YaOEr5TDGGFbubSIpJoIFJWl2xzmp5NhI8lNidRw/yGjhK+UwNS29HGztZemUTFuWUP
DX9NxEDrf30z0wbHcU5SfnfjcpFaZe29dEooOP7o+bnpuEAfYd6bY7ivKTFr5SDlLT3ENtSy8XOfzoHnxLJqf
GReqwThBx9neUUmFm5b4mEqOdf3QPICJMy0mipqWHYY/X7jjKD1r4SjlETYvv6N7pY/djlWcnMOwx1LX
22R1F+SE4vquUCgOv7fUd3Z83yflH98eVZiTgFqHymI7jBwMtfKUcYGNtGzVBdnQPvsXUitPjqGzqsTuK8kP
wfGcpFcIeWFVFfJCM3Z+oPDuRo10DdOn0TMfTwlfKZnsau3jjQDMXlKUTFRF8P5LlWQkAVB3To3ynC77v
LqVCzINvVhMf5WbhpHS7o5yRnOQYEqIjONCk4/hOp4WvlI0Ot/fx/I4j3HxeEbFRzlszxx8uESZnJVDV1KM3
RXE4LXylbPTQ6loE+MSFk+yOclbKsxLoG/JwpENXz3QyLXylbNLeO8STmw6xbE4+eSmxdsc5K+XZiQBU6rC
Oo2nhK2WT36+vo3/Yw/KlpXZHOWsJ0RHkJcdwQE/cOpoWvlI26B/y8Ojag1w6LYupOYl2x5kQk7MSONT
Wx9CILrPgVFr4Stng6S2HaOsd4tMhcHR/XFlmAh5jqGvttTuKehfOuVGmUkFsxYZ6v7f1GsO9r1ZSmBpLV
VMP1c2hUZDF6fG4RULm3xOKLDvCF5EYEdkoIttFZLeI3G3VvpQKJnsau2jrHWJJeSYiYnecCRMV4aIwLZaa
Fh3Hdyorh3QGgUuNMbOBOcBVInK+hftTKiisrW4lJS6SGXlJdkeZcKWZCTS099PZr8ssOJFlhW98jv+qjxx90
6syVFhr7OjnYGsvi0rTcYXQ0f1xpZnxGHyLwSnnsfSkrYi4RWQb0AS8YozZcJJtlovlZhHZ3NzcbGUcpWy3rrq
VSLdQURx8i6T5oyg1jgiXsLa6xe4o6iQsLXxjjMcYMwcoAM4TkZkn2eZBY0yFMaYiMzPTyjhK2apncITthzuY
W5QatMsojCfC7aIkPZ511a12R1EnEZBpmcaYDmAVcFUg9qeUE2062MaI17CoNDgXSfNXaWY8+45209Iz
```

aHcUdQIrZ+lkikjK6PuxwOXAPqv2p5STebyGDTWtTM5KIDspxu44lirL9C2XvL5Gj/Kdxsoj/FxglYjsADbhG8
N/wcL9KeVYuxo76RoYYXFZaB/dA+SlxJIQHcFaHdZxHMsuvDLG7ADmWvX4SgWTtVUtpMdHMSU7NJZR
OBW3S1g4KY31WviOo0srKGWxQ219HGrvZ1FZaE7FPJlFZenUtPRypLPf7ihqDC18pSy2rqaV6AgX84pS7Y
4SMItGh650to6z+FX4IvInEXmfiOgvCKVOQ9fAMDsPdzK/OJWYyNCcinky03OSSImL1HF8h/G3wH8J3AJUi
siPRGSqhZmUChkba9vwmtCfinkil0tYVJrOuupWjN720DH8KnxjzKvGmFuBecBB4FURWSsiHxeRSCsDKh
WsRjxeNtS2MTUnkfSEaLvjBNzisnQaOvqpb+uzO4oa5fcQjYikA7cBnwS2Aj/D9wvgFUuSKRXkdjR00js48s5
4drhZVJYBwJoqHdZxCn/H8P8MrAbigPcbY641xjxpjPkskGBlQKWCkTGGtdUtZCVGMzkzPH9EyjLjyUqMZp
1egOUY/s7D/40x5sWxnxCRaGPMoDGmwoJcSgW1utY+GjsGWDYnL6TWvD8dIsLisnTeqmrBGBO2z4OT
+Duk818n+dy6iQyiVChZW9NKbKSbuYXhMxXzZBaXZdDSM0Rlk94UxQlOeYQvIjlAPhArInOB47+ik/AN7yi
lTtDRN8Sexk4umJxBVER4z2QeOx8/HK4ydrrxhnSuxHeitgC4Z8znu4GvW5RJqaC2vqYNY+D8MJuKeTKFa
XEUpsWytrqFjy0usTtO2Dtl4RtjHgMeE5HrjTHPBCiTUkFraMTLpoNtzMhLljUuyu44jrC4NIO/7T6Kx2twu3
Qc307jDel82BjzOFAill868evGmHtO8teUClvbD3XQP+xh8eiUROUb1nly8yH2HuliZn6y3XHC2ngDjPGjfyY
AiSd5U0qNMsawprqF3OQYStL1FNdxx8fx9baH9htvSOfXo3/eHZg4SgWvmpZemroHuX5egU5BHCM7KY
ayzHjWVreyfGmZ3XHCmr8XXv1ERJJEJFJEVopIs4h82OpwSgWTtVUtxEe5mVWgwxYnWlyWwcbaNoY9X
rujhDV/54xdYYzpAq7Bt5bOZOAuq0IpFWyaugbYe7SbhaXpRLrDeyrmySwuS6dvyMOOwx12Rwlr/n5nHh
/6eR/wlDGm06I8SgWl1ZUtRLol7FbF9NfxKaprdV0dW/lb+C+IyD5gPrBSRDKBAetiKRU8Gjv62Xaog4riNO
KjLbtraFBLjY9iRm6Sro9vM3+XR/4asBioMMYMA73AMiuDKRUsfvtWLQbDheU6FfNUFpels6W+nYFhj91
RwtbpDDZOA24UkY8CNwBXWBNJqeDR0TfEHzfWM7sgRS+0GsfiyekMjXh5u67d7ihhy6/XnyLye6AM2A
Yc//VsgN9ZlEupoPC7dXX0DXlYMiXT7iiOt6AkDbdLWFvdyuLJ+mrIDv4OOFYAM4zeq0ypd3QPDPPImlou
nZZFTlKM3XEcLzEmklkFybo+vo38HdLZBeRYGUSpYPOb1bW09w3zxcum2B0laCwuS2f7oQ56BkfsjhKW/
C38DGCPiLwsIs8df7MymFJO1tIzyG9X1/C+c3M5Vy+08tvisgxGvIZNB9vsjhKW/B3S+a6VIZQKNg+sqmJgx
MuXrtCj+9MxvziVKLeLddWtXDI1y+44YcevwjfGvCEixUC5MeZVEYkD3NZGU8qZDrf38Yf19dwwr4CyML1
f7ZmKiXQzrzhFF1Kzib+zdD4FLAfS8M3WyQd+BbzHumhK+WfFhvqz+vu3LCw6re3ve7USBD5/WflZ7TdcL
S7L4N5XD9DRN0SKTmUNKH/H8D8DXAB0ARhjKgF9PabCzo7DHTzz9mE+en4xeSmxdscJSovK0jHGd2cw
FVj+Fv6gMWbo+AciEoFvHr5SYcPjNXzr2V1kJETzOT26P2OzC1KIjXTrsI4N/C38N0Tk6/huZn458BTwvHWx
lHKeFRvq2H64k29cPZ2kmEi74wStqAgX55emsbpSCz/Q/C38rwHNwE7g08CLwDetCqWU09S39vHDl/Zx4
eQMls3JsztO0FtSnkltSy+H2vrsjhJW/J2l4xWRZ4FnjTHNFmdSylE8XsNdT2/HLcKPb5ild7OaAEtHl6J4s7KZ
WxcW25wmfJzyCF98visiLcB+YP/o3a6+HZh4StnvZysr2VDbxrffP4N8PVE7Icoy48lPieXNA3r8GEjjDel8Ed/
snAXGmDRjTBqwELhARL5oeTqlbLZqfxP3v1bJDfMLuGF+gd1xQoaIsHRKBmurWvW2hwE0XuF/BLjZGFN
7/BPGmBrgw8BHT/UXRaRQRFaJyB4R2S0inz/7uEoFzq6GTv79D28zLSeJ7y+bqUM5E2xJeSbdgyNsP6S3P
QyU8Qo/0hjzL6fSR8fxx5umMAJ82RgzAzgf+IyIzDizmEoFVnVzDx9/dBPJsZE8ctsCYqP0wvKJdkFZBi5Bh3U
CaLzCHzrDr2GMOWKMeXv0/W5gL74rdJVytP1Hu7nx1+sxxvDYJ84jJ1mXPrZCclwkcwpTeEOnZwbMeLN
0ZotI10k+L4DfPwUiUgLMBTac5GvL8S3bQFHR6V3irtREW7W/ic+t2EpslJsVn1rE5CxdK+dM+LvcRUpcFKv
2NfHQ6hriov65jk53yQs1vlMe4Rtj3MaYpJO8JRpj/LryREQSgGeALxhj/uWXhzHmQWNMhTGmIjNT7xqk7
DE04uXHf9vHJx7dRGFaHH/+zAVa9gEwJSsBA1Q19dgdJSz4uzzyGRGRSHxl/wdjzJ+s3JdSZ8IYw8q9x/jhS/
uoaurhxopCvnPtjH852lTWyE+NIybSReWxHmYVpNgdJ+RZ9l0tvikNvwX2GmPusWo/Sp2phvZ+Xtx1hNq
WXiZlxPPQRyu4bEa23bHCitsllGclcuBYN15jcOlMKEtZeRhzAb5pnTtFZNvo575ujHnRwn0qNa72viFe2XO
MbYc6iIty871l53DzeUVEuv1daURNpGk5iexs6KSxo5+C1Di744Q0ywrfGPMWvpO7SjlC/5CHNw40sbbad
xPti6ZkctGUTD66qMTeYGFuSnYiAuw72q2FbzEdqFQhzxjD2/XtvLTrKP1DHuYWpXDZ9Gy9+YZDxEdHUJQ
Wx76jXVw2XYfUrKSFr0JaW+8Qf956mOrmXkrS47hmVp7euMSBpuUk8vKeY3T2D5Mcq0tPW0ULX4UkY
wyb69p5YUcjLhGWzcljQUmanhR0qKm5Sby85xgHjnazYFKa3XFClha+CjkjXi/PbWtkc107kzMTuH5+gR41
Olx2YjSpcZHsPdqlhW8hLXwVUgaGPazYUE9Vcw+XTM3kPdOz9ag+CIgIU3OS2FLXxrDHqzOmLKLPqgoZ/
UMeHl5TS01LDzfMK+DyGTla9kFkWk4iwx5DTbNedWsVLXwVEgaHfWV/pGOAWxcWM6841e5I6jRNyo
gnyu1i79Fuu6OELC18FfQ8XsMfN9VzpLOfWxYWMT03ye5I6gxEul2UZyew90gXXmPsjhOStPBVUDPG8Jd
tDRw41sOy2fla9kHunLxkugdG9ObmFtHCV0Ht/teq2FzXziVTM3V2RwiYlpOI2yXsaui0O0pI0sJXQevvu49
yzysHmFuYoldohoiYSDflWQnsPtKF0WGdCaeFr4JSfWsfX35qO+fmJ3Pd3Hy932wIOScvmY6+YXbqUf6E0
8JXQWdg2MOdf9iCAL+8dZ7O2Q4x03MTcQm8tOuo3VFCjv6kqKBz9/N72N3YxT0fmkNhmq6uGGrioiIoz
UzgpZ1HdFhngmnhq6Dy4s4j/HFjPXdcVKY3KwlhM/OSOdjaxz6dkz+htPBV0DjWNcDX/7yT2QXJfPmKKXb
HURaakZekwzoW0LV0VFAwxnDX0zsYGPZwz41zJnTcfsWG+gl7LDUxEqIjOG9SGn/d0cgXLyvXk/ITRI/wVV
B4fH0dbx5o5htXT6csM8HuOCoArp2dT3VzL7sbu+yOEjK08JXjVTf38IMX93LRlEw+fH6x3XFUgFx9bg6Rb
uHZrQ12RwkZWvjK0YY9Xr745DZiIt389IZZ+tI+jKTERXHx1Cye296Ix6uzdSaCFr5ytPtfq2LH4U5++IFzyUqK
sTuOCrAPzM2nqXuQ9TWtdkcJCVr4yrHerm/ngVVVXD+vgPeem2t3HGWDS6dlkRgdocM6E0QLXzlS7+AI
X3pyGzlJMXzn2hl2x1E2iYl0c9XMHF7adZSBYY/dcYKeFr5ypB+8uJe6tj7u+dBskmL0frTh7Lq5+fQMjrByb5
PdUYKeFr5ynNf2HWPFhnqWLy1lYWm63XGUzc4vTSc7KZo/67DOWdPCV47S1D3AXU/tYFpOIl+6XK+mV
eB2CdfNyef1/U00dw/aHSeoaeErx/B6DV/+v+30DI5w/81ziY5w2x1JOcQHKwoZ8Rr+9PZhu6MENV1aQT
nGw2tqWV3Zwn9dN5Py7ES74yibnbjkRXF6HL9ZXUNCdITf12PcsrDIimhBS4/wlSPsaujkx3/bxxUzsrlVf0jV
SSwoTqOlZ4iDrXq/2zOlha9s1zc0wuee2EpafBQ/vl6vplUnNzM/megIF5sPttkdJWhp4Svbfe/5PdS29HLvh

+aQGh9ldxzlUFERLmYXpLCrsZP+IZ2Tfya08JWtnt/eyBObDnHHRWUsnpxhdxzlcBUlqQx7DNsPd9gdJShp
4SvbVDV189VndjC/OFWnYCq/5KfEkpscw+aDbXr7wzOgha9s0TM4wqd/v4XYSDcP3KI3Ilf+EREWlKTR2D
nAofZ+u+MEHf0pUwFnjOFrz+ygtqWX+2+eS06yroKp/De3KIXoCBfrqlvsjhJ0LCt8EXlYRJpEZJdV+1DB6bdv
1fLCjiPcdeU0HbdXpy06ws284lR2NXTRPTBsd5ygYuUR/qPAVRY+vgpCr+9v4r9f3Mt7Z+bw6aWldsdRQW
rRpHQ8xrBRp2ieFssK3xjzJqD/G+od1c09fPaPW5mak8T/fmg2LpfOt1dnJiMxmvKsBDbWtundsE6D7Usri
MhyYDlAUZFeYRlMTrz0/VT6hzz88vUqvF7DNbNyeXZro4XJVDhYVJbO79bVsbuxk1kFKXbHCQq2n7Q1xjx
ojKkwxlRkZmbaHUdZYMTj5fENdXT0DXPrwmJS4/TiKnX2pmQnkhYfxbpqvf2hv2wvfBXavMbw1JbD1Lb0
csP8Akoy4u2OpEKES4RFpenUtfVxqE3X1/GHFr6y1N92HWVnQydXnZPD7EJ92a0mVkVxKjGRLlZXNtsdJS
hYOS3zj8A6YKqIHBaR263al3KmNVUtvFXVwvml6Swp1+mXauJFR7pZOCmd3Y1dtPbozVHGY+UsnZuNM
bnGmEhjTIEx5rdW7Us5z86GTl7ceYQZuUlcMytXV8BUlllUlo7LJbxVpRdijUeHdNSEq2zq5qnNhyhKi+PGB
YW4tOyVhZJiIplbmMKWunZ6BkfsjuNoWvhqQtW29PL4+joyEqL5yKJiXSNHBcSS8kw8XsP6Gp2xcyr606g
mzKG2Ph5bd5CU2Cg+ceEk4qJsv8xDhYnMxGim5SaxrrqVwRFdK//daOGrCdHY0c8ja2tJiI7g9gsnkRCtZa8
C6+IpmfQPe1hfoxf4vxstfHXWjnUN8PCaWqIj3Nx+4SSSYiPtjqTCUGFaHFOyE1hd2axH+e9CC1+dlcaOfh5
aXYNbhNsvnKRX0SpbXTotm74hDxv0KP+ktPDVGatv6+Oht2qIcLv41NJSMhKi7Y6kwlxRWhzlWb6j/KERr9
1xHEcLX52RddWtPPxWLXFRESzXslcOcum0LHqHPGyo1Rk7J9LCV6dt1f4mbntkIylxkSxfWqrDOMpRitPjm
ZyVwJuVLfTqvPx/ooWvTsuzWxtY/rvNTM5K4FNLSkmK0RO0ynkum55N7+AID62utTuKo2jhK78YY7h/ZS
VfeHIb84tTWfGp84nXqZfKoYrS4jgnL4kH36ymRdfYeYcWvhrXsMfL157Zyf++coDr5uTx2CfOI1mnXiqHu2
JGDgMjXn6+stLuKI6hha9Oqbl7kFt/s4EnNx/i3y+ZzL03ziE6wm13LKXGlZkYzU0LClmxoZ7all674ziCFr56V9
sPdXDtL95iR0MHP7tpDl+5cqqueqmCyucvKycqwsVPX95ndxRH0MJX/8IYw+/X1/HBX6/DJcLTdyxm2Zx8
u2MpddqyEmP41JJSXtx5lI21ejGWFr76Jx19Q9zx+Ba+9ewuFpWm8/xnL2RmfrLdsZQ6Y5++qJT8lFi+/Zdd
jHjC+2IsLXz1jrVVLbz3Z6t5bV8T33zfdB65bQFp8TrHXgW3uKgIvnXNDPYd7ebRtQftjmMrLXxF98Aw//mn
ndzy0AZiIt08c+diPrmkFJdLx+tVaLjynGwunprJfa9WcqxrwO44ttHCD2PGGF7Zc4wr732TJzfVs3xpKS99fg
mzCvRm4yq0iAh3X3sOQx4vP/jrXrvj2EavnAlTNc09fO+FPby+v5nyrASevnMx84pS7Y6llGWK0+O586Iyfra
ykg/My+eSqVl2Rwo4PcIPM72DI/zopX1ced+bbDnYzjffN50XP79Ey16FhTsvLmNqdiL/8fQO2nuH7I4TcFr
4YWLY4+Xx9XVc8j+v86s3qlk2J5+VX7mITy4p1fvOqrARE+nmnhtn09E3xDef3YUxxu5IAaVDOiHO4zU8v7
2Re145QH1bHxXFqfzqI/P1iF6FrXPykvnCZVP46cv7uXxbNtfNDZ9rTLTwQ5TXa3h591Hue7WS/ce6mZGb
xCO3LeDiqZl6tawKe3dcVMZr+5r41l92Mb84lcK0OLsjBYQ46SVNRUWF2bx5s90xHG/Fhvp3/ZrHa9h2qI
M3DzTT3DNIRkIUl03PZmZ+Mi4tehVmbllY9K5fq2vt5Zr736IwNY6n71xEXFRwHv+KyBZjTIU/2wbnv1D9i8
ERD1vq2nmrsoWO/mFyk2O4aUGhFr1S76l4PZ6f3zyXTzy6ibue2sEvbpkb8q9+tfCDXHvvEOtqWtlc18bAs
Jfi9DiWzclnSnZCyH/zKnW2LpmaxdeumsYPX9rHjNeT+Mwlk+2OZCkt/CDkNYball7WVbey90gXIr4TUReU
pVOUHm93PKWCyvKlpew50sX//H0/JenxvG9Wrt2RLKOFH0SaugZ4+u3DPLS6lrbeIeKi3Cydksn5pel6QxK
lzpCl8OPrZ9HQ3s8XntxKXLQ7ZC/K0sJ3uIFhD6/vb+ZPbx9m5b4mPF5DSXo875mWxcz8ZJ1Dr9QEiIl08/D
HF3DLb9bz6d9t4Ze3zuOyGdl2x5pwWvgO5PEa1te08pdtDby06yjdAyNkJETxyQsnceOCQtbX6LreSk20pJ
hIHr99IR97eCN3PL6FH/7buXywotDuWBNKCz/A3m1K5bDHS3VTD3uOdLHvaCg/wucAAAllSURBVDc9gy
NER7g4Jy+J2QUplGYm4HaJlr1SFkqJi+LxTy7kjse3cNfTO6hq6uGuK6cSESKvpLXwbdTeO0R1cw/7j3VTeay
HIY+X6AgXU7ITmZmfzLScRB2yUSrAEmMiefTj53H387v59Zs1bKlr594b54TExVla+AHU1jvEzoZOqpt6qGr
uoW108aakmAjmFKUwIzeJ0oz4kDmaUCpYRbpd/Nd157KgJI1v/HkXV9z7Jl+6fAofW1xCVETw/nxq4VvE4
zVUNfWwtb6dbYc62FrfwYGmboyB6AgXkzLiWVyWTllmAlmJ0TpnXikHWjYnnwUlaXzz2V384MW9PL6hj
s9cPJlr5+QRE+m2O95p06UVJsDAsIeqph72H+3mQFM3Ow93sv1QB71DHgCSYyOZU5jC/OJU+gZHyE+N
w613k1LKcqdaWuF0GGN4/UAzP/nbfvYe6SI1LpKbzyvi+vkFlGbE23rA5pilFUTkKuBngBt4yBjzIyv3Z6W+o
REa2vs53NFPQ3s/DR39VDX1UHmsm7q2Po7/3oxyu5iSk8C/zStgblEKcwpTmDTmG+JU6+AopZxJRLhkah
YXT8lkfU0bj66t5VdvVPPL16spSY/j0mnZnF+axsz8ZHKTYxz7it2ywhcRN/AAcDlwGNgkIs8ZY/ZYtU/wrRI54
jV4jcFz/H2vwTPm44FhD/1DHt+fwx76hnwfd/QN0d43TPvonx19Q7T1DnGkc+Cd8fbjIlxCSUY8M/KSuG5
uPlOzEynPTqQkPU7H4JUKUSLCorJ0FpWl09jRz8q9x3htXxOPb6jj4TW1AKTFRzE5M4H81FgKUmPJSowm
KTaSpNhIkmMjSYqJJDrCRXSEi6jjb25XQHrDyiP884AqY0wNgIg8ASwDJrzwZ9/9d3oGR/B4J2Z4Kjk2ktS4S
FLjo8hOimF2YQr5Kb7/PN+fcWQmRuuwjFJhLC8llo8sKuEji0oYGPaw50gXuxs62dnQycGWPjbWtvGXbf3
4U0vp8VFs+dbllme2svDzgUNjPj4MLDxxIxFZDiwf/bBHRPZbmMkfGUCLzRn8FSxZgyUnBE9WzemHW09v
c9uy1gHybb83PzFnsb9/0fZZOsaYB4EH7c5xnIhs9vcEiN2CJWuw5ITgyao5J16wZD2bnFYOGjUAY69LLhj9
nFJKKRtYWfibgHIRmSQiUcBNwHMW7k8ppdQpWDakY4wZEZF/B17GNy3zYWPMbqv2N4EcM7zkh2DJG
iw5IXiyas6JFyxZzzinoy68UkopZR2dMK6UUmFCC18ppcJE2Ba+iFwlIvtFpEpEvnaSr0eLyJOjX98gliWBT+lXz
qUi8raIjIjIDXZkHJNlvKxfEpE9IrJDRFaKiN/zhwOc8w4R2Ski20TkLRGZYUfO0SynzDpmu+tFxIiILdMK/XhOb
xOR5tHndJuIfNKOnKNZxn1OReRDo9+ru0VkRaAzjmYY7zm9d8zzeUBEOsZ9UGNM2L3hO4lcDZQCUcB2Y
MYJ2/w/4Fej798EPOnQnCXALOB3wA0Of04vAeJG37/Twc9p0pj3rwX+5tTndHS7ROBNYD1Q4cScwG3AL
+x4Hs8gazmwFUgd/TjLiTlP2P6z+CbGnPJxw/UI/51lH4wxQ8DxZR/GWgY8Nvr+08B7JPArIo2b0xhz0BizA/
AGONuJ/Mm6yhjTN/rhenzXZgSaPzm7xnwYD9g1s8Gf71OA7wM/BgYCGW4Mf3M6gT9ZPwU8YIxpBzD
GNAU4I5z+c3oz8MfxHjRcC/9kyz7kv9s2xpgRoBNID0i6k2QYdbKcTnG6WW8HXrI00cn5lVNEPiMi1cBPg
M8FKNuJxs0qIvOAQmPMXwMZ7AT+/t9fPzqc97SI2HWzWH+yTgGmiMgaEVk/uupvoPn98zQ6NDoJeG2

8Bw3Xwlc2EpEPAxXAT+3O8m6MMQ8YY8qArwLftDvPyYiIC7gH+LLdWfzwPFBijJkFvMI/Xj07UQS+YZ2L8
R05/0ZEUmxNdGo3AU8bYzzjbRiuhe/Psg/vbCMiEUAy0BqQdCfJMMrJy1P4lVVELgO+AVxrjBkMULaxTvc
5fQK4ztJE7268rInATOB1ETkInA88Z8OJ23GfU2NM65j/74eA+QHKdiJ//v8PA88ZY4aNMbXAAXy/AALpdL
5Pb8KP4RwgbE/aRgA1+F4GHT8hcs4J23yGfz5p+39OzDlm20ex96StP8/pXHwnosodnrN8zPvvBzY7NesJ2
7+OPSdt/XlOc8e8/wFgvVOfU+Aq4LHR9zPwDa2kOy3n6HbTgIOMXkQ77uPa8aQ74Q24Gt9v7mrgG6Of+
x6+I0+AGOApoArYCJQ6NOcCfEckvfhegex28HP6KnAM2Db69pxDc/4M2D2acdWpStburCdsa0vh+/mc/n
D0Od0++pxOc+pzCgi+obI9wE7gJifmHP34u8CP/H1MXVpBKaXCRLiO4SulVNjRwldKqTChha+UUmFCC18
ppcKEFr5SSoUJLXwVUkTEM7p64G4R2S4iXx69IhURqRCRn1u8/+vsXF1TqVPRaZkqpIhIjzEmYfT9LGAFsM
YY850A7f9R4AVjzNOn8XcijG+9JqUspYWvQsrYwh/9uBTYhO+KyYuArxhjrhGR8/BdYBUD9AMfN8bsF5Hb
8C2lEI/vcvr/wXel40eAQeBqY0ybiJQBDwCZQB++FRbTgBfwLbTXCVw/GuOftjPG7Bv9xTCA7+rjNcaYL1nzj
Cj1D5bdxFwpJzDG1IiIG8g64Uv7gCXGmJHR9X3+m38U9Ex8RRyD70rrrxpj5orIvcBHgfvw3Uj6DmNMpYg
sBH5pjLlURJ5jzBG+iKw8cTvg0tH9FACLjR+LXik1EbTwVbhKBh4TkXJ8691HjvnaKmNMN9AtIp34VnoE32X
2s0QkAVgMPDXmFgnRJ+7Aj+2e0rJXgaSFr0La6JCOB2gCpo/50vfxFfsHRm9f+fqYr41dxdM75mMvvp8ZF
9BhjJkzzu7H267Xj3+CUhNGZ+mokCUimcCv8N1a78STVcn8Y7nZ207ncY3vjli1IvLB0f2IiMwe/XI3vmWLx
9tOqYDTwlehJvb4tEx8q3P+Hbj7JNv9BPihiGzlzF7p3grcLiLb8a0Cefz2c08Ad4nI1tETu++2nVIBp7N0lFIqT
OgRvlJKhQktfKWUChNa+EopFSa08JVSKkxo4SulVJjQwldKqTChha+UUmFCC18pVSKkxo4SulVJjQwldKqTChha+UUmHi/wPSfFi+T+CL2gAAAABJRU5E
rkJggg==\n"
        },
        "metadata": {
          "needs_background": "light"
        }
      }
    ]
   },
   {
    "cell_type": "code",
    "source": [
     "plt.scatter(data['Diameter'].head(400),data['Length'].head(400))"
    ],
    "metadata": {
     "colab": {
      "base_uri": "https://localhost:8080/",
      "height": 282
     },
     "id": "bpq3Fj5lKi6K",
     "outputId": "7163c7df-c228-427b-d281-9b97be8627ba"
    },
    "execution_count": 10,
    "outputs": [
     {
      "output_type": "execute_result",
      "data": {
       "text/plain": [
        "<matplotlib.collections.PathCollection at 0x7f39f1c01ed0>"
       ]
      },
      "metadata": {},
      "execution_count": 10
     },
     {
      "output_type": "display_data",
      "data": {
       "text/plain": [
        "<Figure size 432x288 with 1 Axes>"
       ],
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAXQAAAD4CAYAAAD8Zh1EAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA

AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAAejElEQVR4nO3df4wU95nn8fczTWP3JDkGy0RaN2BYi+CzlxjiifEJK
be2kkASLUbYDuBYOut2g/YUXzY/hBYUn5M4kWCDLrGlRaewlqUraewlqU9eWNIHGtEBDl273C0C0OrRYjBccBIkTTG
zDRHdhbcarC2PomXnuj5keFz1V1dXd1b+qPy8Jabq6putbGnjmy1PP9/mauyMiIt2vr90DEBGBGRdCigi4hkh
AK6iEhGKKCLiGSEArqISEbMadeFb7zxRl+yZEmWfzDw46/aBAtvWLmfDqmJLx6CALi
LSoKETI+x44RRjpQkARkbH2PHCKYCWBnUFdBGRBu0+/OpMMC8bK02w+/Cr1wT0Zs/iFdBFRBr029Gxqs
dbMYvXQ1ERkQbdNFCoejxuFp8WBXQRkQZtW7ucQj53z4ZzbFCPse2tctnXieZxTdKKRcRkYCoPHfw+LxCHjM
YvVyaOWfnxhWx+fGbBgqMhATvqNl9Pxade4oODg66mnOJSCepzHPD1Ez7/juL/PjlkVkpk+A5OzeuiM2F
R312te+rZGYvu/tg2HtKuYiITIvKcz/30vnIYF4+p1oufMOqIjs3rqA4UMCA4kCh5mBejVIuliLTovLZEwkyGUl
y4RtWFZtal64ZuojItKh8ds6s7u9tJQV0Ecm8oRMjrNl1hKXbD7Jm1xGToyEnhdVrbJl9aJZxyvPCVa0tItSLi
KSaXELeoBZlSn331nkuZfOM+FOzoz77yzy7Q0rGLz5htgql1b3bQmTqMrFzNYBTwE54Gl331Xx/veAe6Zf9
gMfdPeBuM9UlYuItMKaXUdCywXn9+d5tzR5PCfJ+BQWnivbhYTyVKM8VVuVSdoZtZDtgDfAK4ABw3s
wPufqZ8jrt/OXD+fwZWNTxqEZEGlOvFmIm3hWAdZupJcuh3AWfd/Zy
7XwX2AffFnL8L8Fec6NwYmI1KOcZokK5rUK68lS/uxyBUw5lROVn2+FJAG9CJwPvL4wfWwWM7sZWAoaocaX
xoIiL1CasnDyrkcxTyyTtT477d4d4stUq7ymUz8LYRmRJXE15e0HN9T
NVKpXcDAbxavXmavVlqlSSgjwCLAq8XTh8Ls5mYdIu773X3QXcfXLBgQfJRiohUiCtFjKoJL+e5dx9x+NTSHH
mWsNFn1s5O+30xJyhaPA8vMbClTgXwz8FDlSWZ2KzAf+KdURygiMi34MNKA8i8MPMyt7i29YuD2bcs+tC2
Ydb/TaQfk+a2s9etUZuruPA48Ch4FfAD9099Nm9oRZMyt7i29YuD+2bcs+tC2
6gvl1c/pirz2j+oLSplK3RRHpClH15JXiygeXbj8YHYxjRM3Io65/dPu9dVwl4VjUbVFEul3Sh41x5YPzCvmQ76
iull8Cnf5QVESk7Wp52BhVPPpigx1aoJM25ytr5UFQBXUS6QljjrLgwOzI6NqsKZrRKZUs+Z1PL/wOimnPl+4x
8bva5Hf1QVESkE4Q96PzeppXM749Oo4yMjuG8Bg9wN3sPvBO2auMVDIc32+j7879ibX5/sY
KORnrr37wTvY/cAdTd2wolZ6KCoiXW3lN/+e0bFkNeUDhTxXxxicTbQOX1pZxadNDURHJrHcSBnOA0bES1
83pY35/vuqsOmo7unYu7a9GAV1EulJ5pWitOYbRsRKXLpdw4P+88y7Db7wdel5UtUo7q1iqUUAXka6TVj
fFCXeePfYmjw2dmvVeVLVKq6tYqlsgd3B0qSiw5+X3mnoFr6sCTx3Evn+faGFdcci2of0AlbzUV
RQBeRpovbBi5s44hy0L/n1gXsP35+ZgehpA8/y4oDBX5/Zbzq902EFIeUx1XPL6F2UUAXkaaLe8BYDpBhQf
/ZY2/Wfc0+g6Pb7w2tVqkUtXBow6piRwfwSgroItJ0SR4wVtuUrMhIaTPtX/5bejYwz057luTl/kTH3L6kWhx7u
NHoqKSFM9NnQshLFgVt2HOKxoVNNqR4pLyy6dLnElfJfJnty0kofvXjwzl8+Z8fDdi2flz7uVFhaJSNM8NnQ
qcdok3weBfSSaotmdEFshbmGRUi4iUrdqlSvPvXQ+5ruv1exgDp1dQ54GBXQRqcvQiRG+sv8k5Tg8MjrGl/
af5Ev7T9Kf72NsfJJO2+6mk2vI06AcuojUZccLPydqUn251Npg3g2dEFtBAV1E6jLWihxJAg/fvXhWF8ZO7IT
YCkq5iEhXypmxZfWimQQVsGCd9QBeSQFdROrSZ1O13u2QM+MPO+9u01O13u2QM+O1nZ9uz8U7mFIuIhKp3nEwuOtP2UOrF
7dtXFlZCJS2RAHdzNaZ2atmdtbMtodmtbMtkec81kzO2Nmp83sB+kOU0RaLdjRMLrzTmoD958Q8tmhFldCJS2qgu
LzCwH/Ar4BHABOA5scfczgXOWAWN7nX3S2b2QXf/XKtRncsu
gs46+7n3P0qsA+4+r+KczwN73SVgLiKdL24RzoR7GJd7XZgEbJd7XZg+FvQh4ENmdtTMjpnZnZ
urAPMrOtZjZsZsMXL16bS8b8Qi0lT17gTULMWMLwZKU1pVLnOAZcAfAwuBfzSzFe4+GjzJ3L
UkJUlazbbaPbcuaPcQukaSGfoIEHykvHD6WNAF4IC7l9z9N0zl3JeJ0eM0QRaZW0W9jGed/cXPWTgBd/qf/NJ
5UkoB8HlpnZUjObOC2wGDlScM8TU7V4Mcpli3QiuZV+T7jyU0rOf3EOp7ctLJqEMp6Q600V
U25uPu4mT0KHAZywDPDuftrMngaCG3f3A9HufNLMzwASdd3faubARSS5pPrt0hHvQJADfwf1q3jyK9SssSOpYr5Tj5SDAaHjj5TjFimsHt3mLu
m7WG2qlSf3QRTIuLC9eyOdCe5t87m/+iaOvvd2UcfTn+zjzrU+lMs5epn7oIj0sbj/P8vsjo2PkzJpaIni5NMkt
Ow5d038lqBs3Ze40mqGLZNzS7QcjSxAL+VxbKlqSrPZMmibqNY0uLBKRLnZ9PvyfuUHbyhOr7WRUre2Ah
FNAF8m4K+PhKzqb+X/zgUKe+f35yPerpXaqpYkknHLoIhnXjha3J7/+SQBu2XEoNHiXm21FiSpVVAljPM3Q
RTIuPnSmLzgzj2pzW639bVSpokoY42mGLtKlgg8N5xYmGly6WZapVyzXcrJ+j5nPH1P7l95nX5wedzL5
1nwn3WLkNRtq1dHlrCmPU9QRulKheRLpS050qzq1gMGOjPM3q5qlHoliqpcwqkOXSRjkvZcaXYViwPvlib5
3qaVqQfbDauKCuA1UkAX6UKd9HCwXH0SDL6PDZ2qOc0ijdNDUZEu1GkPB1+9eivz/lOUuVuFMt8uSXX2S2VIUaP/hy
fZY2/y2NCpdg2vZyigi3ShVvQIX3PLDRTy17a4jaqYCf6CiVo0VG0xkTROAV2kw5V3EFq6/SBrdh1h6MRIS3
qEv/7WGDs3rqA4UMCY6pT4ubsXzwryldUnUYuGtJVc8ymHLtJmcdUcldUs5SXwjT7snJszrk7EB9jfjo6FPp
gcvPmG2OqTqCZf1RYTSeMU0EXaKCpgw1SVR9QS+EY7I+b6+mAi/pdCVJ6+WvXJltWLePbYm6HHHpbkU0
EXaKK5nyYZVxchqlkbTF0nq17etXV5XLXi9i4mkcQroIm1UrWdXWrnZrvrDXJLh8txTzw4Ab8Ky0k
zCuEdCcvHt61dPushZLPl++LTPep42Lk0Qxdpo6jnjnhKWJSdbOjLTp+X6fB+XLpdaMqbdD64E1PGwG2mGL
tIG5VLEqCD9+6sTM5s7jI6VeLc0ScQ+FbHiepIDPLlp5TVliU8Glvcr42H3STRDN7N1wFNADnja3XStwDnja3XdVvP8IsB
sobyfy1+7+dIrjFMmMpI21guopU1xzyw383ef/HX+442BoT/Q+i69YUcfD7lM1oJtZDtgDfAK4ABw3swPuf
qbi1P3u/mgTxiiSCeWKkVY95Hz9ranrPLR6cWgZ4UOrF8d+vzZt7j5JZuh3AWfd/RyAme0D7gMqA7qIRKh
nVt6ocq67kTJCdTzsLkkCehEINmG4AKwOOe9+M/sY8Cvgy+aV8jPPFi9aaDAf/3sHQrOG
ZfWQ9GfAEvc/cPAPwB/G3aSma2c0XuleyUJ6CNACNAc
M3uQt57+AmAu7/l7lemXz4N3Bn2Qe6+190H3X1wwYLmd4sTaDTFUlYcKPD
hry7EsS0I8Dy8xsqZnNBTYDB4InmNkfBF6uB36R3hBFpFIlsPD15d0
9ihwmKmyxWfc/bSZPQsB4ltmth4YB94GHm7imEV6Wq1f0hvhrO0IGMLtmvnimEU6WtLt4dJU+aAzqmWAasizLVEdursfAg5VHHs8

8PUOYEe6QxPpLkkegBpT+3BW02eE1o5HfeZrOz99zTHVkPcmLf0XaUCtVSyJgjnJgzmEz7pVQ96bFNBF6t
Ss2vLJGs6Nm3Wrhrz3KKCL1KkduXID+ufmuHx1QrNumUUBXaRO7agY+c2uz9T1ffVsVCHdRwFdpE4D/f
mWtbSF6p0To1Tb5k6yQ+1zRerUyjLzfM74+p/cXtf3aqOK3qEZuvSsJGmIsHOG33h7ptFVM5U3gi42mCLR
RhW9QwFdelKSNETYOV/Zf7KmKpR65cxm1ZbXS4uMeodSLtKTotIQX9p/kjW7jszMzCvPaUUwB9iyelH1k
xIK25dUi4yySTN06Ulx6YbybL1VJYmFfB9XxieZ9NlL+NOgRUa9QwFdelJUGqJsrDQxk8NulkI+x86NK1oSW
LXIqDco5SI9adva5eT7LPacCfdZqYq0FAcKiYN5eUPppdsPzqSDRMIooEvvio/nM0G3GZc9uv3exMG8vEm
GNqqQahTQpSftPvzqrA0ggsoPDZuRpqilukQ15FIL5dAlU5IucY97KGoGhvPl/ScbCpy5PqMPKAVaJ4ZVl8S
NWTXkUgsFdMmMWpa4xz0UdYfLpcmZz6hHeTEQxFeXVBuzasilFgrokhlx6YnKgB62AUQtCvkc75YmQvu
b58w4uv3emddxaZtqY9ZGFVIL5dAlM6LSECOjY7OqQzasKrJz4wqKdcx0c2bs3LgicrOKWkodq6VUguM0a
quOkd6jGbpkRlwaJSz9Uq7N/rf/5aeMlZKvAZ10Z8OqYuRORbX8kkiSUlENuSSlGbpkRtgS96Co6pAr47Ut6
C8H2zSW1GtZvqRJAV0yY8OqIvffWSRn0QXmYemXuP07Kz8pGGzTSIcopSJpMk+Q7zOzdcBTQA542t13R
Zx3P/A88FF3H477zMHBQR8ejj1FpCZDJ0bY9vwrsfXlZYV8jo8snsexc5cic959Bt/97Er1QJGOYmYvu/tg2Ht
Vc+hmlgP2AJ8ALgDHzeyAu5+pOO8DwF8ALzU+ZJHaffMnpxMFc5hKvxx97e3Yc3Km/LV0lyQpl7uAs+5+z
t2vAvuA+0LO+xbwV8C7KY5PJLG0t4Or4TmpSEdIUuVSBM4HXl8AVgdPMLOPAIvc/aCZbYv6IDPbCmwF
WLx4ce2jFQkor7AcGR2LzZuL9IqGH4qaWR/wXeCr1c51973uPujugwsWLGj00tLDyvnycslfM9rc1rsps0i7J
AnoI0Bw+5SF08fKPgD8EfAzM3sduBs4YGahSXuRNNSSL69HI5syi7RLkoB+HFhmZkvNbC6wGThQftPd33
H3G919ibsvAY4B66tVuYjEqdYDPEm+vDhQ4MlNK2PPKadqDHjf3NxM6eDuB+7Qw1DpOlVz6O4+bmaP
AoeZKlt8xt1Pm9kTwLC7H4j/BJHaDJ0YYduPXpnpUjgyOsa2H70y837SDojb1i6vem5aGzGLdIJEdejNoDp0i
bLym3/P6NjsGXgh3wdYooZa/fk+vMq5A4U8J7/+yUaGKtJyDdWhizRbZT/wsGAOJO63ks8Z1+VzsWmZfJ/
xjfXKkUu2aOm/tFXYFmuNumvJfEZjgnlxoMDuB5Ujl+zRDF3aKqwfeKOOvvY2/fm+mU0qgooDhWt6lYtki
QK6tEVwUVAzjI1PUsjntDGE9BSlXKTlgmmWZnFHXQyl52iGLi3XjDRLGDXWkl6jGbq0nHasF2kOzdClZcp5
81asfKhnr1CRbqeALi1Rzpu3ItWih5/Sq5RykZZoRt48rGHu/P68Hn5Kz9IMXZoq7fLEnBlbVi/i2xtWzFphqu
3hpNcpoEvTpJ1mmd+f58Tj7/VeURWLyLWUcpGmSTPNov7kItVphi6pSyvNMr8/z+jlktIpIgkpoEuq0kqzq
OeKSO2UcpFUpZFmUdmhSH00Qxdgdk/yelMcjaZZikqviNRNAV1mpUlGRsfY8cIpgJoDq9lUY6x6KM0i0hg
FdAlNk4yVJth9+NWqAb1yZl9vMFeaRaRxCugS2Swr6niwisVgpjdLvekWpVlE0pEooJvZOuApIAc87e67Kt7
/c+ALwATw/4Ct7n4m5bFKk9w0UAgNxjeFNLiqTM8knZDn+2BObvaGE1qmL5KeqlUuZpYD9gCfAm4Dtpj
ZbRWn/cDdV7j7SuA7wHdTH6k0zba1yynkc9ccK+Rz3HPrAtbsOsLS7QdZs+vIzMy8niqW91+f14YTIk2WZI
Z+F3DW3c8BmNk+4D5gZgbu7v8aOP99JJ+4SQcoB9VyLnxeIc/V8QmePfbmzDkjo2N8ef/Jun+wo5dLWq
ov0mRJ6tCLwPnA6wvTx65hZl8ws9eYmqF/MZ3hSatsWFXk6PZ7+d6mlVwZnwzdYDlJMA/rgAjh6RsRSVd
qC4vcfY+73wL8JfBY2DlmttXMhs1s+OLFi2ldWlLUyMKg4kCBz929ODR9owoWkeZLknIZARYFXi+cPhZlH/
Dfwt5w973AXoDBwUGlZTpQvdvDBWvIB2++QW1tRdogSUA/Diwzs6VMBfLNwEPBE8xsmbv/evrlZ4BfIx
0vWEM+r5CfWhRUx+dUzsCVKxdpj6oB3d3HzexR4DBTZYvPuPtpM3sCGHb3A8CjZvZxoARcAv5DMwctja
ssPxwdK9X0/eX6c9WQi3SORHXo7n4IOFRx7PHA13+R8rikyZLmyss7BCmNItL5tFK0BwRTK9fn+7gyPslkw
tzKhDs/fnmEwZtvUJ8VkQ6n9rkZV06tjIyO4cBYKXkwLyv3dRGRzqaAnnFpbQNXb/WLiLSOAnrGpRWItTBI
pPMpoGdcGoFYC4NEuoMCesaFNd6qhZpoiXQPVblkXLDxVq39yrWDkEh30Qy9B5Qbbz25aWXi2brSLCL
dRzP0DAvuLJQzY8Kd+f15rpvTxztjpZnl/qOXSwz053GHd8ZKWjgk0qUU0LtU5V6elQG4cmn/xPRmn5culyj
kc3xv00oFbJGMUcqlC1UuFhoZHWPHC6cYOvFeE8y4+nMtFBLJJs3QO1TcDDwsWJeDdPmcavXnWigkkj2
aoXegajPwqGqV4PFq9edaKCSSPQroHShuBg5gEfu8BY/H1Z+rgkUkm5Ry6UBR6ZDycY9orhU8Xll/Xq5yUf
9ykexSQO9A8wr50A0n5hXyNX2Odg4S6S1KuXSgaimVgYjAHnVcRHqDAnoHGr0cvh1c+fg31t9Ovu/aqJ/v
M76x/vamj01EOpdSLm0WVp5400AhtJKlXJkSzI9rSzgRKVNAb6PK1Zzl8sT77yzy45dHrql0qaxMUX5cRCo
p5dJGUeWJL/7yIjs3rqA4UMBQC1sRSSbRDN3M1gFPATngaXffVfH+V4A/A8aBi8B/dPc3Uh5rpgydGlldIK
QZuIjUquoM3cxywB7gU8BtwBYzu63itBPAoLt/GHge+E7aA82ScqolSi6qzEVEJEaSlMtdwFl3P+fuV4F9wH
3BE9z9RXe/PP3yGLAw3WFmS7WNmyeiVg6JiMRIEtCLwPnA6wvTx6L8KfDTsDfMbKuZDZvZ8MWLF5OP
MmOqNcYqqs+KiNQh1YeiZvYwMAjsDnvf3fe6+6C7Dy5YsCDNS3eVuBWf6rMiIvVK8lB0BFgUeL1w+tg1z
OzjwNeAf+/uV9IZXjbFrQRVNYuI1CvJDP04sMzMlprZXGAzcCB4gpmtAr4PrHf336U/zGyJWgmKo2AuInW
rOkN393EzexQ4zFTZ4jPuftrMngCG3f0AUymW9wM/sqnp55vuvr6J4+5o1baHq7YSVESkHonq0N39EHC
o4tjjga8/nvK4ulbU6k94b/a9be3ya84B5c5FpHFaKZqyaptTwFRg10pQEUmberk0qDK9kmR7OFAvFhFJn
wJ6A8LSK1G0+lNEmk0plwZUW/EZpNWfltJsCugNiJuRV9LqTxFpNgX0BiRNo6iCRURaQQG9AXFpFFWwiE
ir6aFoA4oRVS3FgQJHt9/bhhGJSC/TDL0B29Yup5DPXXNM6RURaRfN0BugzZpFpJMooDdIC4REpFMo5SIi
khGaoVeo1ilRRKRTKaAHJOmUKCLSqZRyCUjSKVFEpFMpoAdEbd5cbVNnEZFOoIAeELVjkHYSEpFuoIAeoI
VCItLNejqgD50YYc2uIyzdfpA1u44AaCchEelaPVvlElXRsnPjCvVhEZGulGiGbmbrzOxVMztrZttD3v+Ymf2z
mY2b2QPpDzN9qmgRkaypGtDNLAfsAT4F3AZsMbPbKk57E3gE+EHaA2wWVbSISNYkmaHfBZx193PufhX
YB9wXPMHdX3f3nwOTTRhjU6iiRUSyJklALwLnA68vTB/raqpoEZGsaelDUTPbCmwFWLx4cSsvPYta34pI1i
QJ6CPAosDrhdPHaubue4G9AIODg9H7t7WIWt+KSJYkSbkcB5aZ2VIzmwtsBg40d1gillKrqgHd3ceBR4HD
wC+AH7r7aTN7wszWA5jZR83sAvAg8H0zO93MQYuIyGyJcujufgg4VHHs8cDXx5lKxTSVepWLiETrmpWi6l
UuIhKva3q5aGWniEi8rgnoWtkpIhKvawK6VnaKiMTrmoCulZ0iIvG65qGoVnaKiMTrmoAOWtkpIhKna1IuI
iISTwFdRCQjFNBFRDJCAV1EJCMU0EVEMsLc29OW3MwuAm+05eLJ3Aj8S7sH0US6v+6m++tujdzfze6+IO

```
yNtgX0Tmdmw+4+2O5xNIvur7vp/rpbs+5PKRcRkYxQQBcRyQgF9Gh72z2AJtP9dTfdX3dryv0phy4ikhGao
YuIZIQCuohIRvR8QDezdWb2qpmdNbPtIe9/zMz+2czGzeyBdoyxEQnu7ytmdsbMfm5m/8vMbm7HOOu
V4P7+3MxOmdlJM/vfZnZbO8ZZr2r3FzjvfjNzM+uaUr8EP7tHzOzi9M/upJn9WTvGWa8kPzsz++z0v7/TZv
aDhi/q7j37B8gBrwF/CMwFXgFuqzhnCfBh4L8DD7R7zE24v3uA/umv/xOwv93jTvn+/k3g6/XA/2j3uNO8v
+nzPgD8I3AMGGz3uFP82T0C/HW7x9rE+1sGnADmT7/+YKPX7fUZ+l3AWXc/5+5XgX3AfcET3P11d/85M
NmOATYoyf296O6Xp18eAxa2eIyNSHJ//xp4+T6gm6oAqt7ftG8BfwW828rBNSjpvXWrJPf3eWCPu18CcP
ffNXrRXg/oReB84PWF6WNZUev9/Snw06aOKF2J7s/MvmBmrwHfAb7YorGloer9mdlHgEXufrCVA0tB0r+
b90+nA583s0WtGVoqktzfh4APmdlRMztmZusavWivB3SZZmYPA4PA7naPJW3uvsfdbwwH+Enis3eNJi5n1
Ad8FvtrusTTJT4Al7v5h4B+Av23eNI2h6m0yx8DW4C/MbOBj6w1wP6CBD8rb9w+lhWJLo/M/s48DVgv
btfadHY0lDrz28fsKGpI0pXtfv7APBHwM/M7HwGzlzc/e3An9hF4IC7l9z9N8CYhDk7+YF4IC7l9z9N
8CvmArwdev1gH4cWGZmSS81sLrAZONDmMaWp6v2Z2Srg+0wF84ZzeC2W5P6C/0A+A/y6heNrVOz9ufs
77n6juy9x9yVMPQNZ7+7D7RluTZL87P4g8HI98IsWjq9RSWLLEFOzc8zsRqZSMOcaumq7nwa3+w/waaZ
+M74GfG362BNM/cMA+ChTv0l/D7wFnG73mFO+v/8J/F/5fA+0ec8r39xRwevreXgRub/eY07y/inN/R
pdUuST82e2c/tm9Mv2zu7XdY075/oyplNkZ4BSwudFraum/iEhG9HrKRUQkMxTQRUQyQgFdRCQjFNBF
RDJCAV1EJCMU0EVEMkIBXUkI/4/xh8V7DdkBusAAAAASUVORK5CYII=\n"
        },
        "metadata": {
          "needs_background": "light"
        }
      }
    ]
  },
  {
    "cell_type": "code",
    "source": [
      "plt.bar(data['Sex'].head(20),data['Rings'].head(20))\n",
      "plt.title('Bar plot')\n",
      "plt.xlabel('Diameter')\n",
      "plt.ylabel('Rings')"
    ],
    "metadata": {
      "colab": {
        "base_uri": "https://localhost:8080/",
        "height": 312
      },
      "id": "KfKw7QjQKmPQ",
      "outputId": "7032f3ce-6cdb-46d4-f471-9252e1b10e01"
    },
    "execution_count": 11,
    "outputs": [
      {
        "output_type": "execute_result",
        "data": {
          "text/plain": [
            "Text(0, 0.5, 'Rings')"
          ]
        },
        "metadata": {},
        "execution_count": 11
      },
      {
        "output_type": "display_data",
        "data": {
          "text/plain": [
            "<Figure size 432x288 with 1 Axes>"
          ],
```

"image/png":
"iVBORw0KGgoAAAANSUhEUgAAAYgAAAEWCAYAAAB8LwAVAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAAVE0lEQVR4nO3de9RddX3n8feHmziAXMwjcouplcUqpYCuZ4VakS
Iq5VahrYOkLkUHm+LojK5xxOoPFrtsdtaM4slLJAlsFxBabCgpIRXgRGKQHQHDTWHIMGFIQBIMhqt0At/54
+wMJw+/55LLOSfheb/f77X2+T85KPvntvvtvc/eqSokSZpoh1EXIEIEnaNhkQkqkqQmA0KS1GRASJKaDA
hJUpMBIUlqMiCkbUSSi5L8L8yajvl9KpKRkreJJHkyIyZ5KBR19WSpJK8atR16IXNgJA29ptVtTuwH/A
Q8NnN2UmSnbZqVdIIGBBSQ1X9HPgcOiGtiQnJ/lhkkeT7fJIy/kB4+bG6Zwge8luJ9/ZMB4B3p3kyCQvAj4B3FhVK7r+h4BXbu
b7SzPipXjSxv4hyTP0ZgL3AWdW1Z1d378GPpnkfOA7wFfonfbnDeDF8BHqE3Q3gSOLuq7po4qKq+leQPPgb+
lF1L/Azijb8hHgHgYuTvBhYWFVf2cQ6pGnFBwZJw5hkOWzEhbkOBBqurAUdcizYSHmCRJTQaEJKnpJ0ySpCZnEJKkp
hfUVUxz5sypefPmjboMSdqu3HbbbY+tqbGE6hoUQY/nqbsn4fLwZfpC5VNAYA=
kaxdfPmjboMSdpu3HzzzQ9X1Vir7wUVEPPmzWPp0qWjLkOSthtJ7pusz0NMkqQmA0KS1GRA
SJKaDAhJUpMBIUlqMiAkSU0DC4gkB3UPV/lRkjuTfKBr3yfJtUnu6X7uPcn2Z3Zj7kly5qDqlCS1DXIGsR74U
FUdCvwq8L4khwLnANdV1cHAdd36dRpLsA5wLHAXMB86dLEgkSYMxsICoqger6pZ+TF6D105ADgVuLgbdjF
djEw8aHv0Hvg+7VVtbaqHgGuBU4E7yjepuwetvxq4Edi3qh7sun7sun4C7NvY5AA2frbvSiZ5Fm+m+ShcB
CgLlz526dgrXNm3fOlaMu4QVrxXknj7oEbSMGfpI6ye70nor1wap6tL+vereS3aLbyVbVoqoar6rxsbHm7U
QkSZthoAGRZGd64fCl7gHwAA8l2a/r3w9Y3dh0Bh+riXAhquuSzgr
+vrH51cDxSfbuTk4f37VJkoaY3TVpHhAVIBKoZkkKDOI1wHvAI5vdHYdZIZgFqyTGAICdO1QXuInqpRFCE5Bc
CgLlz526dgrXNm3fOlaMu4QVrxXknj7oEbSMGfpI6ye70nor1wap6tL+vereS3aLbyVbVoqoar6rxsbHm7U
QkSZthoAGRZGd64fCl7gHwAA8l2a/r3w9Y3dh0FXBQ3/qB+LB2SRqqQV7FFOBC4MdV9am+GP4DAvgSpaMA-
+vrH51cDxSfbuTk4f37VJkoZkkDOI1wHvAI5Lsqx7nQScB7w5yT3Am7p1kown+QJAVa0FPg7c7c1L0+1rVJko
ZkYCepq+p7QCbpfmNj/FLgPX3ri6HFg6lOkjQdv0ktSWoyICRJTQaEJKnJgJAkNRkQkqQmA0KS1GRASJKaD
AhJUpMBIUlqMiAkSU0GhCSpyYCQJDUZEJKkJgNCktRkQEiSmgwISVLTwB4YlGQxcAqwAqwuqoO69ouAw7ph
uwF/KyqjmxsuwJ4DHgWF95V4OqU5LUNrCAAC4Czge/uKGhqt62bzTnYERpWjuN4D3fn+SdwFLgQ1X1yIT+A4D7+9ZZDdVuNtrMkC4
HjtZQZF6rL0mA04HjBvX+AkNUlXSAs5jYH2rZuFHHqqeqeybpAuJqNdWYhmY7mmZTpFpy64b
Hjt6QZF6rL0mA04HjBvX+kqQtM6pzEK8K8HHqqqeybpL+CaJDcncRP5RRkRHlzUAxPrkpdKc3KGAk
vkrqq6oTWwC5CFAHPnzt36lUrSLDX0ZH6GfwFfiBOt
HGJ6E3BXVa1sdSbZLckeE8v0Hjh0xxDrk6RZb2ABkeQy4FzgkEb5R7dN91pnnAoMntQ/SEClAi
rmoOqUJLUN8iqmvR2OvoQUXQEJcmCIRUPmxkQEYyqCEQmvkSpQgVVxq4wuKnNCMEZPHxwKqzy3rZRCLXZV7
IgJElNBoQkqcmAkCQ1GRCSpyYCQJDUZEJKkJgNCktRkQEiSmgwISVLTwB4YlGQxcAqwAqwuqoO69ouAw7ph
20eTrEqyrHudNdNMm2JyS5O8nyJocAGWjOpOcQYqOOJEsLMl6KLWcYe2u75XjdYOGY
aBBURV3QCs3YxN5wPLq+reqvn4FLg1K1anCRpWjuN4D3fn+SdwFLgQ1X1yIT+A4D7+9ZZXAkdNtrMkC4
GFAHPnzt3souadc+Vmb6uprTjv5FGXIGkzDPsk9eeBXWxOBB4EPrmlVkO6yqRVU1XlXjY2NbWV
VQ9V1TNV9SzwV/QQOJ020CjiOb/3Ark2SNERDDYgk+/Wt/hZhZwS7AGcR8hYS7AGcCSYdQnSXrOwM5
BJLkEOBBaYk2QlcHBlwrC5WbAL/fjd0f+EJVnVRgGa7BFYXF3V3DqpOSVLbwAKiqt7eaL6wMW47cFLf+nXAdcN1QH9
El961cBz7sEVpI0PH6TWpLUZEAIzUZEJKkJgNCktRkQEiSmgwISVLTwB4YlGQxcAqwAqwuqoO69ouAw7ph
hJUpMBIUlqMiAkSU0GhCSpyYCQJDUZEJKkJgNCktRkQEiSmgwISVLTwB4YlGQxcAqwAqwuqoO69ouAw7ph
oGqUJE1ukDOIi4ATJrRdZKwAt+cvsSWj6RSpNWggfGtRdfYkqMdXMxdWHR1d+kLkh6Y3jFAzhzU
+0uStswoz0H8K+n1H1gwDhrXHRxn8tsJ9XcB3xnqiDj2ZCpuCBsFMZD4gUbsKcCBpKAsO1QhLXcX2uXKv7l91YW9Ba11
+SYyfZVVYuqaqxsfGTNTkMPiCTv4Ak4B3lXlmpfFNiDR/vqZmAJ7IbS2Bn6QuphAVVoGzn0tqQ
kJGN2S7LHhmXgeOC01lhJ0uAM8jLXy4BzgUOSrExyFnA+sAJwbZJlSb7XjR1PclG3fBDw/XkzpW
moOiVJbTsNasdVOaLPbnHn7BqajWJskBCJbD2CFHcfYB4M4T/GD3G0rTLR6hauQ3lV/Xr5kZNjbUkVZZ
cPohiEhbjfFRJLrk7wkyT7T7LcrYB6NqaxZ+hYj+4F
D1AdYjSdpGzDQgPgZcDSyvquFpSvBK4Z3GeplK+g4HL9bvBX5nUEVJkZvRgGR5DON5nXA0qr6
+61bkiRpWzDTQ0y7AkfSO6x0fbDA4bxMvBdfBzZkhWxLpRgGZ6s7gDddV1TMAST4PFbGc4Grh9QLV1kZkZo
pjOIvYHd+9Z3ApvpAuPprpPV6VJGnkZjqD+D/HCY/+/+/Ej3DAeA
PxhIZZKkkdqUeHtAKwBcqHgFeleSYWwZQkZqQkSdoWzPTQk5dSd6KvOBeY4AgqCTbNRdwzPQY1z8D3gbgbcCTRdwxzzTbNRdwzzTbLQZOAVZX1X1Z2z7AZCA
8YAVwelU90tSd6tj2TOA/d6ubZvbQUlZWMdWMxZGnAIVV1clX9Zvd6pOMaAhs3NEHc1twpsSmnvNyKbLAS98NYxPc
EuRM4FjqJ3WOvJdc0Oqr+FSLrvsSHvHm9pbGCC9fqDdPhsNvwHHRvUJZWkbGRPVydCcfXAL90JksQMD4oNvQMlpcF
gmV7F9CS9q5iuo++y1qr6t5vxnvtW1YPd8k+AfRtjDgDu71U9VXT1AEKAuXFnbbkY5kqSWmQbEku61
VVVVJak3MciYBHA+Pj4Fu1LkvScmV7mjuPED+UZLzqerC7hfjqxpwavLF86wcC12/FGiRJ05jyHESSES3Q/
b09y28TXZr7nEuDMbvmHWzv6uB47vHm+4NHN+1SZKGZlo4c6LdWysqWgQMQM/ZwJ0vZEZ1e
VnAffQeQkSSceDsqnpPa1N8nHgpm5xl6GPVyMuiHYWTcvx8LLR1bxeQQQMCPNz6oDrGF6rcQLadlisyvFk
5cC7+lbXwsnmr/kqTBme4Q00uSFS3+UmOT8+UDGiY3tUB4Y3yjyqnOmpB6M3aaQ0sqfdDTh0t/S5wsY5b2KEFN1jlwv4ElCTLG2jqaXbS
pAl65NkjRC0wXEK6VUbA4EjhbVT7feWSpJGa7ea7VhbMi/FnGRR4J7gq3R8vYmNvs8hdfHX0dH3Tqn6gGJpHPOILVoB1mm5I8l3HXdF3Rm
fc/tJQOtTpI0MtNdxbTwbFFkZ1EKu3tqYqEKAbFrLqo0fNwJuvZU5jQCAVmt1RTyYEvFVQEyqxBL6EsaCQ5ISpaCPoIGRY0yICRJ3

QaEJKlpps+klqQtMu+cK0ddwgvWivNOHsh+nUFIkpqGHhBJDkmyrO/1aJIPThhzbJJ1fWP+aNh1StJsN/RD
TFV1N3AkQJIdgVXAFY2h362qzXoWtiRpy436ENMbgf818ZnXkqTRG3VAnAFcMknfa5PcmuQbSX55sh0k
WZhkaZKla9asGUyVkjQLjSwgkuwCvAW4vNF9C/CKqjoC+Czwtcn2U1WLqmq8qsbHxsYGU6wkzUKjnEGc
CNxSVQ9N7KiqR6vq8W75KmDnJHOGXaAkzWajDIgFTHJ4KcnLk6Rbnk+vzp8OsTZJmvVG8kW5JLsBbwZ+
v6/tbICqugB4K/DeJOuBp4AzqqpGUaskzVYjCYiqegJ46YS2C/qWzwfOH3ZdkqTnjPoqJknSNsqAkCQ1GRC
SpCYDQpLUZEBIkpoMCElSkwEhSWoyICRJTQaEJKnJgJAkNRkQkqQmA0KS1GRASJKaDAhJUpMBIUlqMiA
kSU0GhCSpaWQBkWRFktuTLEuytNGfJJ9JsjbUleM4o6JWm2GskjR/u8oaoenqTvRODg7nUU8PnupyRp
CLblQ0ynAl+snh8AeyXZb9RFSdJsMcqAKOCaJDcnWdjoPwC4v299Zde2kSQLkyxNsnTNmjUDKlWSZp9RB
sTRVfUaeoeS3pfkmM3ZSVUtqqrxqhofGxvbuhVK0iw2soCoqlXdz9XAFcD8CUNWAQf1rR/YtUmShmAkA
ZFktyR7bFgGjgfumDBsCfDO7mqmXwXWVdWDQy5VkmatUV3Ft9wRZINNXy5qr6Z5GyAqroAuAo4CVg
OPAm8e0S1KkmaYQMCElSkwEhSWoyICRJTQaEJKnJgJAk
NRkQkqQmA0KS1GRASJKaDAhJUpMBIUlqMiAkSU0GhCSpyYCQJDUZEJKkJgNCktRkQEiSmoYeEEkOSvLtJ
D9KcmeSDzTGHJtkXZJl3euPhl2nJM12o3jk6HrgQ1V1S5I9I9gJuTXFtVP5ow7rtVdcoI6pMkMYIZRFU9WFW
3dMuPAT8GDhh2HZKkqY30HESSecCrgRsb3a9NcmuSbyT55Sn2sTDJ0iRL16xZM6BKJWn2GVlAJNkd+Fvg
g1X16ITuW4BXVNURwGeBr022n6paVFjVTU+NjY2uIIlaZYZSUAk2ZleOHypqv5uYn9VPVpVj3fLVwE7J5k
z5DIlaVYbxVVMAS4EflxVf5pkzMu7cSSZT6/Onw6vSknSKK5ieh3wDuD2JMu6tj8A5gFU1QXAqcB7k6wH
ngLOqKoaQa2SNGsNPSCq6gYg04z5HPC54VQkSWrxm9SSpCYDQpLUZEBIkpoMCElSkwEhSWoyICRJTQaEJKnJgJAkNRkQkqQmA0KS1GRASJKa
DAhJUpMBIUlqMiAkSU0GhCSpyYCQJDUZEJKkJgNCk
tRkQEiSmgwISVKTASFJajIgJElNBoQkqcmAkCQ1GRCSpCYDQpLUZEBIkpoMCElS00gCIskJSe5OsjzJOY3+Fy
W5rOu/Mcm84VcpSbPb0AMiyY7A54ETgcOBBUkOnzDs3cBPq+qXgD8DPjHcKiVJo3jk6HxgeVXdC5DkK8Ap
wI/6xpwCnNct/w1wfpJM92zqn63/GXfdddeUb77rTrvwshe/ZOPjsLR0NJy/ljqmJkD0gWkwFOT0tCjZmAV7
RpVg9Xo+e3/Hr9/3tJUMmv2azZmH9t3ZKU/EYjw/lIUrp6S4nbeG+e1rcz/tsTvBbDrSRPgD7vdW3tUo5+VV6nW
IZOf8xf91ZuEVjpl11r1kz0GcaYb9q4v3udtKzMiVgmXFqKqZNtnpJLkcX0xXZCs/9OX1GPvQx4qi9YfwVjf/WQ
jmFcZ5zGQMCOyx7Q3qxOvm9psTJp0F0JpUwThJJtpAYBKOSZ9MWZeJTY4PhUwE3klzv8e/DAuNcSvR7qwbSJv6g
C/WtE+Lzi8g+JWx8Jk/8Dte/ZXpY6V0oAKlFtGhWWKAsM7DTCT/zXCBKLfBgyjI6BmUIHYTQT4sWPcJEdGaeWmI
d7J4j0hnS9MNb2MbKZaCw7BiA/Gk6Lrg/9LPCOyoPMUXLi2z2+G68u1D2GpV11O0+KvxcAzbO1cm71eN15mHTK0H
jgs8qyUThaU6OLR6pUczQnFO9c+70Pp0KJ8QAv+c+SN/LHg3UPHV2xQoEzSdwt3VkcHFwmzYH1OXP7sR9OZe6a2
xCdKeh9q7+0onyCJ4BJVH5E+i2Z9z+uTR6e5ztDL4oFLlh8QQUhEUuOB9+nZOpoHfBPTd+ZWqjyQm0XiVlEQ9z0
A9QNu3o9vd7z5ooNdD5gFcWLKKNN9gxtyM+8a/t1UYNQ79pnOv2y5JhHnhbOEuVBmqEPMrAkqxYvmMS/KHqAEEF
HAj7RoJ+OLNrWekBWJ3tk4TJn/M5mc48u2c0O1L/wMvb0XBGRUkFXWe2J6BzH8n3GgrO4xJHqVkm93zQ0W2vgkGkU
EJ2dWz4+Ayl90VN+fpK/A9FyynHvNBWO0hMwW+t2zyx74qULAeGqhV9JcHOKUDQMMYBGG8HqOWQ/C9KyS+/WZ2uw
QTKvzB2Oqcj+K2ZuKqGwZQi3EqDU3cbpqiFsGf5xxUAr+TnQGm6DKrMN0zAw3OmaE1fRfn4s5+rgp/i8P0p9N1mDt
WGMRfavLx+5DJHPc+GpD5VWNfrKNzRGSB12XZkNiqxVZB2k2mPJa1i1cHCQPoDd+VxyDvTG7k00dh4rOQ3EvjfTQ4
aGTZwGvKx+aqFoskuBDaO4tlYWgDCZ9Vu6NN9BRnEqY2GPUiDYqPKd8Zb7QgRmGjgMnrSeLkU+YyfPfpUtG5jZnUD
YEaRBNrktjtoN0wKy+NbXOjGPAeptA/V1Gnu4hkhqRGq0T6VtS0v4FbUeBEV1DVi5e8p52qj7wQkQMsB4dEfDFbhXmBw
gB0bGfBnwVJ4KeJpLoZ9WHpIHfqUE1jEnVHNrf2KlGhFHjO97C4dO5BkKPgKg5pBjXb8a0gRHwbR/oGrYzqsQeBtdWW
rNebxbLLyIXxZyS5LTa/Qow+DxOE0E8HX4VkZ4rVGOkzFBqtR5TQtDkLFPj8NXHKqbNmn8lWsRHNnuGKyKM8tlK2DLm
cm5tZWy6F6qbeTAB7jeKQIGE9Q6rj2EkVjZ8RJqwfC5Yn1pAbr8mmLkc6gfDDLkqgXBSqAzD2w51ue7wNbe7eDO1ZIJr
pF1AQi6nNmKK8Sf/DUxuN7LuSKcTnTtJ2PXgfzNA85hO6wr8dp55nHB+bTjBkOk5dSxrxtK8FthcsqqJdOzQg9upUG4Ok
A0gi/cxHnHs2a3w4ZB0b+4PBsRjqVr+z4vrJUcP7rdZGwDWlbnqZf0CpHdv0ArvRPz3AEvHTMKEeCdB4cvjNKO01uD6E
oRd3dxyBNvUklC7x8OPaKmvsl4MJmRpG4G6eB3qJsVMd01qdGXgL2GSYLxEp2AUhoGgsLq5YA0eO3m6FVlb2vFWVz6j
U4kYkY3Tf2cwxbl2Tyvt7O9f3I3c0SYGh4MpeiMb7PIaY/AXkNHk4fJ1aoNjJHrGmuL+DFx5vDuZ9f6z/4o+kEEtm8i
H2QNJW8pRWAoU+R5m4tGAnNJ0oW5nfHdNPR3qTtQe44fpjeWDJTTQLGqA+EVXdDQ8Re2f+1pWXOvfA+6Ba0pXIXhHCj
==\n"

```
 "outputs": [
  {
   "output_type": "execute_result",
   "data": {
    "text/plain": [
     "<matplotlib.axes._subplots.AxesSubplot at 0x7f39f1af3750>"
    ]
   },
   "metadata": {},
   "execution_count": 12
  },
  {
   "output_type": "display_data",
   "data": {
    "text/plain": [
     "<Figure size 432x288 with 1 Axes>"
    ],
    "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAX4AAAEGCAYAAABiq/5QAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAA
ALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6Ly
9tYXRwbG90bGliLm9yZy+WH4yJAAANBklEQVR4nO3dfYyldXmH8evLnO6QQ3RSgToeJ2MSUkFgFlIkWssYK
WKimkpQiN1rba/aciNa0bbJOSkKZpt4ag1phsAYvFQCv1hZCmiLRItYa4S4kIWwKh5WVlymwoBSlFkLt/zG
mybvZlZtnzPMzc1yfZzHnjPHdykmt//OY5z6aqkCT1sd/YA0iShmX4JakZwy9JzRh+SWrG8EtSM6vHHmAxjj
zyyFq7du3YY0jSsrJ58+ZtVTWz4+PLIvxr165l06ZNY48hSctKkod29rhbPZLUjOGXpGYMvyQ1Y/Cl
NGH5JasbwS1Izhl+SmlkWX+CSXo7Wr1/P3NwcRx11FBs2bBh7HGnRDL+0l+bm5ti6devYY0hL5laPJDVj+C
WpGbd69LLy8GVvGHuERXvhiSOA1bzwxEPLau41f3T32CNoZK74JakZwy9JzRh+SWrGPf6ReS748nXkgS8
CL0x+SsuH4R+Z54IvX79/4pNjjyDtFbd6JKmZFbfiP+Vjnx97hCV5xbanWQU8vO3pZTP75j//9bFHkPQSuOK
XpGYMvyQ1Y/glqZkVt8e/3Lx4wCE/9lOSps3wj+yZ49419giSmnGrR5KaMfyS1Izhl6RmDL8kNTO18Ce5Os
njSb633WNHJLklyf2Tn4dP6/iSpJ2b5or/r4CzdnjsEuDWqjoOuHVyX5I0oKmFv6puB57Y4eFzgGsmt68Bzp
3W8SVJOzf0Hv+rq+qxye054NW7emGSdUk2Jdk0Pz8/zHSS1MBov9ytqgJqN89vrKrZqpqdmZkZcDJJWtm
GDv9/JjkaYPLz8YGPL0ntDR3+G4EPTG5/APjqwMeXpPameTrndcC3geOTPJrkg8CfAu9Mcj9w5uS+JGlAU
7tIW1VduIunzpjWMSVJe+Y3dyWpGcMvSc0YfklqxvBLUjOGX5KaMfyS1Izhl6RmDL8kNWP4JakZwy9JzRh
+SWrG8EtSM4ZfKkZgy9JzRh+SmjH8EtSM4ZfKkZgy9JzRh+SWrG8EtSM4ZfkkktSM4ZekZgy9JzRh+SmjH8ktSM4ZekgZgy/JDVj+C
WpGcMvSc0YfklqxvBLUjOjhD/JR5Pck+R7Sa5LcuZwJGlaFhv+1UmOBs4HbpriPJKkKVts+C8DbgYeqKrvJHkdcP/0xpIkTcvqxbyoqr4IfH
G7+w8CvzKtoSRJ07Oo8Cf51E4e/m9gU1V9dd+OJEmapsVu9RwInMzC9s79wInAMcAHk1yx1IMmeVWS
G5L8W5ItSU5b6ntIkvbOolb8LIT+9Kr6EUCSzwL4b+6rwkBwAH78V7SJL2wmJX/IcDh253
/xDgiMlfBM8t5YBJDgPeBlwFUFU/rKonl/IekqS9t9gV/wbgriS3AWEh3H+S5BDg60s85rHAPPC5JCcBm4GL
q+qZ7V+UZB2wDmDNmjVLPlQkaVcWteKvqquAtwBfAb4MvLY0s85mrgTcBnq+qNwDPAJT
s55saqmq2q2ZmZmSUeQpK0K0u5Vs9+LKzU/wv46SRv28tjPgo8WlV3TO7fwMJfBJKkASz2dM4/A94L3A
O8OHm4gNuXesCqmkvySJLjq+o+4Azg3qW+jyRp7yx2j/9c4PiqWtIvcnfjIuALkzN6HgR+cx+9ryRpDxYb/ge
B/VniGTy7UlV3AbP74r0kSUuz2PD/Dwtn9dzKdvGvqo9MZSpJ0tQsNvw3Tv5Ikpa5xV6k7ZppDyJJGsZuw5
/kb6vq/CR3s3AWz4+pKv8JRklaZva04r948vPsaQ8iSRrGbsNfVY9Nfj60/eNJ9gMuBB7a2X8nSXr52u03dyf
/wPrHk/xFkndlwUUsnN55/jAjSpL2pT1t9fw1C5do+DbwIeAPWLhI27mTc/ElScvMnsL/uqp6A0CSK4HHHgD
VV9b9Tn0ySNBV7ukjb8/9/Y3Lt/UeNviQtb3ta8Z+U5KnJ7QAHTe4HqKp65VSnkyTtc3s6q2fVUINIkoaxlOv
xS5JWAMMvSc0YfklqxvBLUjOGX5KaMfyS1Y/Cl
NGH5JasbwS1Izhl+SmjH8ktSM4ZfKkZgy9JzRh+SWrG8EtSM4ZfkkktSM4ZekZgy9JzRh+SmjH8ktSM4
ZekgZgy/JDVj+C
WpGcMvSc0YfklqxvBLUjOGX5KaMfyS1Y/Cl
NGH5JasbwS1Izhl+SmjH8ktSM4ZekgZgy/JDVj+C
WpGcMvSc0YfklqxvBLUjOGX5KaMfyS1Izhl+SmjH8ktSM4ZekgZgy/JDVj+C
WpGcMvSc0YfklqxvBLUjOjhD/JR5Pck+R7Sa5LcuZwJGlaFhv+1UmOBs4HbpriPJKkKVts+C8DbgYeqKrvJHkdcP/0xpIkTcvqxbyoqr4IfH
G7+w8CvzKtoSRJ07Oo8Cf51E4e/m9gU1V9dd+OJEmapsVu9RwInMzC9s79wInAMcAHk1x
```

rRzjmC8DvVdWdSV4BbE5yS1XdO8IsktTO4Cv+qnqsqu6c3H4a2AK8Zug5JKmrUff4k6wF3gjcsZPn1iXZlGT
T/Pz80KNJ0oo1WviTHAr8HfC7VfXUjs9X1caqmq2q2ZmZmeEHlKQVapTwJ9mfheh/oaq+NMYMktTVGGf
1BLgK2FJVlw99fEnqbowV/+nA+4F3JLlr8ufdI8whSS0NfjpnVX0TyNDHlSQt8Ju7ktSM4ZekZgy/JDVj+CWp
GcMvSc0YfklqxvBLUjOGX5KaMfyS1IzhI6RmDL8kNWP4JakZwy9JzRh+SWrG8EtSM4ZfkpwS5K6CqehZ4J57Sutw8W1Unjz2EtDdc8Y/n74H3TG5fCFw34iySGjH847keu
CDJgcCJwB0jz6OlOWi7bZ4vjz2MtBRu9Yykqr472Re+kIXVv5YXt3q0bBn+cd0IfAJ4O/AT444iqQvDP66rgS
er6u4kbx97GEk9GP4RVdWjwKfGnkNSL16yQZKa8aweSWrG8EtSM4Zfkpox/JLUjOGXpGYMv7QHSf4wyT
1Jvju5RMOpY88kvRSexy/tRpLTgLOBN1XVc0mOBA4YeSzpJXHFL+3e0cC2qnoOoKq2VdX3k5yS5BtJNie5
OcnRSQ5Lcl+S4wGSXJfkt0edXtoJv8Al7UaSQ4FvAgcDXwf+BvgX4BvAOVU1n+S9wC9U1W8leSdwGfBJ4D
eq6qyRRpd2ya0eaTeq6gdJTgF+Dvh5FsL/x8AJwC1JAFYBj01ef0uSXwU+A5w0ytDSHrjil5YgyXnA7wAHVt
VpO3l+Pxb+b2At8O6qunvYCaU9c49f2o0kxyc5bruHTga2ADOTX/ySZP8kPzN5/qOT538N+FyS/QcdWFoE
V/zSbky2eT4NvAp4AXgAWAccw8KVVQ9jYcv0CuB24CvAm6vq6SSXA09oXVjzC7tiuGXpGbc6pGkZgy/JD
Vj+CWpGcMvSc0YfklqxvBLUjOGX5Ka+T+wluKL6uLDSQAAAABJRU5ErkJggg==\n"
        },
        "metadata": {
          "needs_background": "light"
        }
      }
    ]
  },
  {
    "cell_type": "code",
    "source": [
      "sns.jointplot(data['Diameter'].head(50),data['Rings'].head(100))"
    ],
    "metadata": {
      "colab": {
        "base_uri": "https://localhost:8080/",
        "height": 458
      },
      "id": "yxAHiidkKsew",
      "outputId": "a984a0e3-6c29-4bc0-e519-57bd17a1de95"
    },
    "execution_count": 13,
    "outputs": [
      {
        "output_type": "execute_result",
        "data": {
          "text/plain": [
            "<seaborn.axisgrid.JointGrid at 0x7f39f1b08650>"
          ]
        },
        "metadata": {},
        "execution_count": 13
      },
      {
        "output_type": "display_data",
        "data": {
          "text/plain": [
            "<Figure size 432x432 with 3 Axes>"
          ],

"image/png":
"iVBORw0KGgoAAAANSUhEUgAAAa8AAAGoCAYAAADxbmq5AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAgAElEQVR4nO3df7xcdX3n8fd7SGw0ITTAJT9vTGN5yJIsRHce2KbbS
4o/S6LKYahfksduCxSW0sugDt6u1Ptaust3WtnStuAKrrLqPFoPPtiixalFJ5UIu2Xm1A4o8G00ByCcklaBLAaaM
L97B/33Di5mZl77s2cH9+Z1/PxmMedOXPmnM/5Jpl35sz3no8o8jQgAApKRRdQEAAMwU4QUASA7hBQBI
DuEFAEgO4QUASM6cqgvoMaZOAugnrrqAuuKTFwAgOYQXACA5hBf63vLhlbJd29Fq4vy4ZVXDxxGQHPFfZFTb
66mDQG7Z16c0PVF1GR5s3rVef/TtE7/CdVwd88gIAJIfwAgAkp9+mygPPpacyRXe4/vy4ZVVDxGQHPFfZFTb
66mDQG7Z16c0PVF1GR5s3rVef/TtE7/CdVwd88gIAJIfwAgAkp9+mygPPpacyRXe+zQ8tWDGt052NVlwEc
RXgBVRs/Uuvv5KSJ7+WAOuG0IQAgOYQXACA5hBcAIDmEFwAgOYQXACA5hBcAIDmEFwAgOYQXACA5hBcAIDmEFwAgOYQXACA5
hBcAIDmEFwAgOYQXACA5hBcAIDmEFwAgOYQXACA5hBcAIDmEFwAgOYQXACA5tETBCVs+vFKP79pZdRkAzCGhq0CbHAu
IDmEFwAgOYQXACA5hBcAIDmEFwAgOY6IqmvoGdt3Szq96jpOw3kv6PfkORZYPjr2FHGvOqe7fsYr2zcd9bl9Zo9pmArZ
BLoqR8ac3cK0c9rS4pcEFngjfXQ2HqSYnl/GkR5sKiVo5C0OhuCM9EmDGU7d8xjvfyMgZy86uvPKa7lz1QxBPP
lJ2sTfJLijPDtCfmXgfRHIjmRIP49X8TxSEtpaRuFmFJ43GyP7E3dU+Wn2qzdkYh5sRQSnE6DG6hUpQQUumwZAicIjuc
AwjSnrQUGcTskxKLZG7LVK1ipBpN4FrEM3KIW7SxgRMUKCXlGVEhmA8EOVq8HvcuLAKD4XfGzFUoRq0ZR1z6bLXg
VgDQC3eSu5G4q5jjDMTuHGnIupDiAcrpzmiEYQU0PBRnbLAlBFF4v9aFM7cAFr+6XiJugBgvEMRWdD9b+kkVvq4Mq8
1vEAAQkcFIvAtZvh6KxLGDMJ2L0NVf4TBgTXGgPPVNXkzzV1Wr+sDEBJbz4x3AKeWMm2AKFI6NwdUXQn89bxg6ApNt
vkLmGc3p0qbuebXrJgrP6hojqmCLRRFdKqnYsZr/NzaxuryAzPRtjmbJa+dytDTD7adl9H9jHxzvKlRjAt3zN
UkTBqfOdkyS3vbkoEhTvrr/mVzbr2eG3RmfNTbc3oqxLFHe5s3w63Ek2qBqTlWBi3Z0M3Xu3ayhAg+HfSDF9T
dHbgMVmYmjEgD6ifXP5kfo8bu6SQd1jPXq/2Z+ZxpvcXeB0I4GyoBzDU8yCu/ByJzA6o/c12EhA3i70OcXgE5Fmw

Z284TXH9lJJl0i6q8B6ACAZNPmsTt7weq+kz0t6JCK+anu1pG3FlQUA9UeTz+rkCq+I+FREnBMRv5k93h4R
byi2NACoN5p8VifvhI0/bbN4v6SRiPhMb0sCgDTQ5LM6eafKz5N0lqRPZY/fIOmfJZ1r+xUR8bYiigOAuqPJZ
zXyhtc5kn4uIp6TJNsflvS3kl4u6RvtXmD7VkkXSdobEWuzZX8o6d9I+pGk70p6U0R8v81rd0g6KOk5SUcioj
mDYwIA9Lm8EzYWSWr9b8V8SadmYfbDDq/5mKQNU5bdI2ltRJwj6Z8k/XaXfb4iItYRXACAqfJ+8nq/pC3Z
Lytb0s9L+j3b8yX9dbsXRMT9tldNWfaFlodfkfQrM6wXAIB84RURH7X9OUnnZYveFRGPZ/d/a5b7/nVJmzv
tUtIXbIekmyPillnuAwDQh2ZybcOGpLHsNT9t+6cj4v7Z7NT270g6IunPOqzy8ogYtX2GpHtsf7vTvmxfJekqS
Vq5cuVsygGAJLW+/0nS5k3re7PhxhzZ3WdMLlsxrNGdj/Vmf7PgiJh+JfsPJF0qaaukyV8nj4eJrXrZJ01+SEj
WzZFZI2SXpVRDybY9+/K+npiPij6dZtNpsxMjIy3WoAkIrcc+5tx6U3P1BkLcfYvGm98uTHCep4/Hk/eW2U9
OKI6DQ5I18V9gZJ/1nSL3QKrux7tEZEHMzuX6iJK3wAACAp/2zD7ZLmzmTDtm+T9GVJL7a9y/aVkm6UdLI
mTgVusX1Ttu6y7Ds1SVos6Uu2H+GxF3z2TfAID+lveT17OamG14r1qmxkfEtZ1eEBGXtVn80Q7rPi
7ptdn97ZLOzVkXAGAA5Q2vO7MbgAqU3fCwdX9LT5mn58alvQdptoj6yDtV/uNFFwKgvbIbHrbub9ELnqd
f+9kX6gP3bqPZImql63detm/Pfn7D9kNTb+WUCAy2shsetu7v9S9dcTS4ytg3kNd0n7zemv28qOhCALTXr
eFhEReDbd2frVL3DeTVNbwiYnf289HW5bYbki6T9Gi71wHoncmGh60hUmTDw6n7K3PfQF7TnTZcaPu3
bd9o+0JP+I+amDp/STklAoOt7IaHrfv7y6/t0ltfdSbNFlE70502/D+SvqeqJ39d6s6R3aeI3njGxJaCawOg8hse
Tt3fkoXzdOHZSzT2NM0WUR/ThdfqiPiXkmT70502/D+SvqeJ39d6s6R3aeI3njdGxJaCawOg8hse
Tt3fkoXzdOHZSzT2NM0WUR/ThdfqiPiXkmT7I5J2S1oZEYcKrwzAUWU3PGy3vxedwXdcqI/prrBxePJO1rtr
F8EFAKjadJ+8zrV9ILtvSc/PHlsTS/PHlsTF+ZdWGh1AAC0Md1sw5PKKgQAgLzyXpgXAIDaILwAAMkhvAAAySG8AA
DJIbwAAMkhvAAAAycnbjBKYlbKbKNZdleMxk313a0a5ctEL9Nj3nuXPFJUivFCYspso1l2V4zGTfU/XjPL6jWv
1wb/Zpkf3/WDg/0xRHU4bojBlN1GsuyrHYyb7nq4Z5bvveFgXnbO89GMAWhFeKEy3JoqDqMrxmMm+8
zSjtI99PKh/pqgO4YXCTDY1bDXIjQyrHI+Z7Hvquu1eFzH9doAiEV4oTNlNFOuuyvGYyb6na0Z5/ca1uuuh0
dKPAWjlaP0vVOKazWaMjIxUXQZaTM5aK6OJYgqqHI+Z7Lt13SULJ2YbTjajnJxtyJ9pKXIPrO249OYHiqzlGJs
3rVcJ+dHx+JltiEKV3USx7qocj5nse7pmlPyZomqcNgQAJIfwAgAkh/ACACSH8AIAJIfwAgAkh9mGANAPbG
3etL68/TXmyC7mVySWrRjW6M7Huq5DeAFAP4hQmb/nvQ8ZvjKSDrO4XxQAUkr5m+86B+68I/RcASJm4
uznog6vvTxbZ5vty4usEwCQlqJPG35Gm35M0o2SPtGt37I37f9zuzxO1pfZPtUv+R1JQUkr5m+86I+F7B9e
IEpdh8slvN3ZoydlqvjONObZzzjnEKx4J6KDS8IuJ+26umLH6dpAuy+x+XdJ+mhJekX5J0T0Q8JUm275G0Qd
JtBZWKHkix+WS3miV1bcrYbr0yjju1cc47xikcC+qjiu+8FkfE7uz+E5IWt1lnuaSdLY93Zctyq2n+xW83RN
GdutN/W5smuuo7xjPPU5oJtKJ2zExCWJT+iyxLavsj1ie2RsbKxHlWE2Umw+2a3mPE0Zp6439bmya66jvG
M89TlMr/X9r+paylZFeO2xvVSSsp9726wzKmm45fGKbNlxIuKWiGhGRHNoaKjnxSK/FJtPdqs5T1PGduu1
Pld2zXU0kzFufQ7Ta33/q7qWslURXndKmpw9eLmkz7RZ5/OSLrS9SJ9/OSLrS9KJuNeGG2DDWWYvPJbjVP15Sx3XpT
nyu75jrKO8ZTnwO6KbQZpe3bNDE543RJezQxg/AOSbdLWinpUUmXRMRRTpuSro6IN2ev/XVJ78o29d8i4hc9o29d8i4
n9Ptz+aUVYvxeaT3Wru1pSx03plHHdq45x3jFM4lpLVthllkVoaXXY8fjopA0B9EV4dcIUNAEByCC8AQHIIL
wBAcggvAEByCC8AQHIILwBAcggvAEByCC8AQHKK7ucFdNTrPk4z2V7V7RPaSOHBnX1t37tXv/IS095flas3Sh
5swp/v+KU49r5aIX6LHvPTttPzIgNYQXKtHrnlQz2V7R/bCOHBnXHQ+O6t13PHx0+9dvXKuN5y4vNMDaH
df1G9fqg3+zTT86Eh37kRFgSBGnDVGJXvdxmsn2iu4htXX3/qPBNbn9d9/xsLbu3t+T7XfS7rjefcfDuuic5V3
7kQEpIrxQiV73cZrJ9oruIbV7f/vtP7G/2B5Vn7fVPQaaWnPL/t9pecUmyPqk7
HNXntbfpmoZ8QXqhEr/s4zWR7RfeQWrN0oa7fuPaY2V7V+/ca3WLD2lJ9vvpN1xXb9xre56aLRrPzIgRbREQ
WV63cdpJtsruofU5GzDJ/Yf0pJT5mnN0lNKnW04eVyTsw2n60eG2qllSgeEFwDUF+HVAUfUAQDJIbwAAMkhvAAAy
MkhvAAAAySG8AADJIbwAAMmhJQoA9ANbmzetr7Knli2tZzRE4fQkhtA8cFqvmTanZ2NJGwKbcJTmp4IqKrBJID2CC/
o6oGk0tAuEarzFTZarprRE4QXaqfoZGUWKgUVWDSQDt8a8OtVN0s8jZQKrBJID2CC/UTtHNImejqgaTANojvFA
7RTeLnI2qGkwCaI/wUAU3SxyUmViDSs28NKAFY5TsNz5jS08dzlOvOMBaU3
mARwPMILtdRoWKukqGk1qHFmj10IKqSzlqzpyGzh1epHOn/xUUAAUr/b+Ntl9se0vL7YDtt01Z5wLb+1vW+S9l1
wkAqK/SP3lFxHckrZMk2ydJGpX06OJbQCANFR9wv5Vkr4bEY9WXAcAIC4BCFVh9cbJd3W4bmft
f2g7b+yvabMogAA9VZZeNl+nqSLJX/TCiDhX0cl3dFlO0fZHrE9MjY2VyAFBDre9/VddStio/eb1
G0tcjYs/UJyLiQEQ8nd3/nKS5tk9vT5GIuCUimhEFQ+IhmHRHBoaKrZiAKiR1ve/qmspW5Xhdzk6nDK0vcvcS2s/vnaaL
OfSXWBgCosUp+z8v2fEm/KGlTy7bF/KBK5J+w/YRST+Q9Q9Mbo5bX0A+QBJqyS8IuZSZSadW0rbP13NPdrWHXTy7Ty
1YdI0AgDRwhQ101K0hZN5mkXnX6XNBX7G+dGGJl7gOXwxy0DjQmbfhA
1hAyb7PIvOv1c6PHOjbWBPoB4YW2ujWEzNssMu96WGNS6Y6NNYF+QHihrW4wN1fM2i8y7Xj83eqxjY02gH
xBeaKtbQ8i8zSLzrmqvNlGjDVQtZuGSuJvgRXlzSG7PZd3G60mZxv2Y6PHvGMAtJH7L4rt
uPTmB4qs5YRs3rRes8ibjsfPbEN01K0hZN5mkXnX6X6+dGj3VsrAmkrj/+awsAGCiEFwAgOYQXAgOYQXACA5
mEFwAgOYQXACA5hBcAIDmEFwAgOYQXACA5hBcAIDmEFwAgOYQXACA5XGFjwNEoEUCKCKVPGd1wBrNKwNa5
DbBOjRLPuvZ8rsMHpCZHeCeS7MO8sL5NYO33kNMBolAkgV4TXAaJQIIFWE1wCjUSKAVBFeA4xGiQBSRXgNMBol
borGvPp1EigKQQXgOORokAUsRpw0BvKUu8N7vbd4tdj6a9nKVKsiRiGhOed6SPiDptBZdAJoC2Z
8AQHIqu8KG7R2SDkPvekr2Dkpe6Tk9XVk77deHmzXvlX0ohEjzRwBoHxVXx7qFRHxZIxzIfXiPpzOz2Mk
kfzn72RC8aMdLMEQCqUefThq+T9ImY8BVJP2l7aa823qkR4459z5S6DQDAzFUZXiHpC7Sz
5fGubNkxbF9le8T2t2YNjYWO6d96IRI80cAVSp9f2v6lrKVmV4vTwixXqJ04Nvsf3zs9lIRNwSEc2IaA4N
S8aMdLMEUCVWt//qq6lbJWFV0SMZj/3SPqUpJdW
vlPTeKavdKeka25/UxESN/RGxu1c19KIRI80cAvAaVc02XCzp0xOz4TVH0p9HxN1V1gQAqL9KwiviI
1MlX9Tr4voRSNGmjkCQPkqCa+I2C7p3DbLB2b2pGLBv5qUuNMN0ijTvkNmlR3KDmf0+tVIeUc0tLT

5BBeAIDkEF4AgOQQXgCA5BBeAIDkVN3Pq1l0kgSANA1seNFIEgDSNbCnDWkkCQDpGthPXt0aSXKRXQC
pmTt3rjZvWj/testWDE+7TgoG9pMXjSQB9JNzzjlHETHtbXTnY1WX2hMDG140kgSAdA3saUMaSQJAugY2
vCQaSQJAqgb2tCEAIF2EFwAgOYQXACA5hBcAIDmEFwAgOYQXACA5hBcAIDmEFwAgOYQXACA5joiqa+
gZ22OSHq26jhNwuqQnqy6iZhiTYzEex+vnMXkyIjbkWdH23XnX7Qd9FV6psz0SEc2q66gTxuRYjMfxGJPBx
GlDAEByCC8AQHIIr3q5peoCaogxORbjcTzGZADxnRcAIDl88gIAJIfwAgAkh/CqgO0Ntr9j+xHb72zz/HW2v2
n7Idv32n5hFXWWJcd4XG37G7a32P6S7bOrqLNM041Jy3pvsB22+36qeI6/J1fYHsv+nmyx/eYq6kQ5+M6
rZLZPkvRPkn5R0i5JX5V0WUR8s2WdV0j6+4h41vZvSLogIi6tpOCC5RyPhRFxILt/saTf7OdfxswzJtl6J0v6rKT
nSbomIkbKrrUsOf+eXCGpGRHXVFIkSsUnr/KdJ+mRiNgeET+S9ElJr2tdISK+GBHPZg+/ImlFyTWWKc94HG
h5OF9Sv/+Pa9oxybxP0h9IOlRmcRXJOyYYEIRX+ZZL2tnyeFe2rJMrJf1VoRVVK9d42H6L7e9Ker+ka0uqrSr
Tjontl0oajojPlllYhfL+u3lDdrr9L2wPl1MaqkB41Zjtfy+pKekPq66lahHxoYh4kaR3SHp31fVUyXZD0g2S3l51
LTXz/yStiohzJN0j6eMV14MCEV7lG5XU+j/CFdmyY9h+taTfkXRxRPywpNqqkGs8WnxS0sZCK6redGNysqS
1ku6zvUPSz0i6s88nbUz79yQi9rX8W/mIpH9VUm2oAOFVvq9KOtP2T9l+nqQ3SrqzdQXbL5F0syaCa28FN
ZYpz3ic2fLwX0vaVmJ9Veg6JhGxPyJOj4hVEbFKE9+LXtzPEzaU7+/J0paHF0v6Von1oWRzqi5g0ETEEdvXSP
q8pJMk3RoRW22/V9JIRNypidOECyR9yrYkPRYRF1dWdIFyjsc12SfRw5K+J+ny6iouXs4xGSg5x+TabDbqE
UlPSbqisoJROKbKAwCSw2lDAEByCC8AQHIILwBAcggvAEByCC8AQHIIL/Qt289lVxffavtB22/Prk4h203bf1
rw/jcOwhXwgSowVR59y/bTEbEgu3+GpD+X9HcR8Z6S9v8xSXdFxF/M4DVzIuJIcVUB/YHwQt9qDa/s8Wp
NXKnhdEm/IOk/RcRFts+T9AFJ8yT9QNKbIE+1HflXSDyW9NiKesv0iSR+SNCTpWU
n/QdKpku6StD+7vSEr45j1IuLbWcgdkvQSTYTrdcWMCNA/uMIGBkZEbM/6Qp0x5alvSzo/u4rDqyX9nn4c
Nms1ESrzJD0i6R0R8RLbfyLp1Lo6IrbZfpmk/kxkRr7R9p1o+edm+d+p6kl6Z7WeFpPUR8VxBhw
/0FcILkE6R9PHsGoohaW7Lc1+MiIOSDtr4krl0vSNySdY3uBpFzJzstOFz
kvZK+hctT71PEyH1y7ZXSbqv5bnWK/qPtzwe18S/n4ak70fEuml2T2P916/Q4BAAZZhtIINgeknSTpBvC96
T9GP22tcmZPtZl2e/9n2v832Y9vnZk8f1ET7kunWAzBDhBf62fMnp8pL+mtJX5X9Mnp8Q0X9us935J/932PwIbmw
YAAABOSURBVGp2ZyP+naQrbT8oaat3J7+k5J+y/Z0HAADJIbwAAAMG8ADJIbwAAAMGkhvAAAyfn/CauNvTmAv
khvAAAyG8ADJIbwAAAMGkhvAAAyfn/CauNvTmAvkhvAAAyG8ADJIbwAAAMGkhvAAAyfn/CauNvTmAvAAAAASUVORK5CYII=\n"
        },
        "metadata": {
          "needs_background": "light"
        }
      }
    ]
  },
  {
    "cell_type": "code",
    "source": [
      "sns.barplot('Diameter','Rings',hue='Sex',data=data.head())"
    ],
    "metadata": {
      "colab": {
        "base_uri": "https://localhost:8080/",
        "height": 296
      },
      "id": "PP6lvhpKKyVT",
      "outputId": "095f21c1-e266-41ea-c3da-1d94e3beecc3"
    },
    "execution_count": 14,
    "outputs": [
      {
        "output_type": "execute_result",
        "data": {
          "text/plain": [
            "<matplotlib.axes._subplots.AxesSubplot at 0x7f39f18d5210>"
          ]
        },
        "metadata": {},
        "execution_count": 14
      },
      {

"output_type": "display_data",
"data": {
"text/plain": [
"<Figure size 432x288 with 1 Axes>"
],
"image/png":
"iVBORw0KGgoAAAANSUhEUgAAAX4AAAEGCAYAAABiq/5QAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAA
ALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6Ly
9tYXRwbG90bGliLm9yZy+WH4yJAAAVgklEQVR4nO3df5RfdX3n8eebJBBIIiAZu8CIEwSyiIkgs6YrFVgQpS
DdHWVLIr8qFlXTXQrpiquHq3uttIDtoVtHDRoskurLhssEXKEmMxYmdCgLSLC0LAMMMQRQIvnx3j++Nz
IOk8x3kvne70w+z8c5c+Z77/cz/70uzCaSpHLs5+4CJEn1MvglqTAGvyQVxuTFsAYxHVuQVnUPXWlLMm
tLqAZ06dPz66urnaXIUnjSm9v71OZ2TF4TF4/7nI/q6Lnp6etpdhiSNKxHxs6H2O9UjSYSVUx+CWpMA
2Y09TVO9UjSIFu2bOGwww4b86ENPFEBEcdthhI/rtxOCXpCGMh9DfaaS1GvySVBiDXXojFi5cyMA
bXYr2wuc//3992997b7pJewn/6wmWWCwG6WGpAtJoivf/Fv6a7m/sBsPW7+S9w9T/L7lJxnIVgkj2xvuxsA
AxcE9Wgw0VGqqNLuFtx7fRKI98L8N1rYbR9/lrFOqsOIrDlqG+jKmr4tRsGsV8VbpgIbj6Sv7sZOnSPTRsoV
nQqN0a1/y+o1hAk/sJcC/5UywYjJ6jKzSNuj/a99pNKoBt4WhbWPuzC8yIsU9aENxTd8yV4rY2ZdmSQUaGk
M6+9+O+TZ6pFrvCIFpn16vWmB58q5N2s9FbV3FmnJ9YXnR9KzIbmD1bKySgxh41rRiZrFPNymVazLxyC5MNdL
8irJa1o7wAgc8dpDvqTX5uy8TpcNbR7JB1r/KWq3nzkCnkfRgSd0/zvM3ycPnKeD3sRLHq1pPLOgqHmD
etFeN6GRkz8X2W9RoN/KSJi8eWkyZa4TvhRlSkZ3NDAQbLYd8cWd5Fc8sgNf4UEPwK2nGPHzqwTlRmh
8mTOLswFXVTn6y1pc4VgZyzgNhkxTdkaC/KO9Y+i8EXUQqLR0Cf0bpChRIXWVl/DkzTQ3V5kHdLx7HYZ3
3FnzBrH6TXN8oo5+rGrPyxKxRl5dpfCaAjI51MT9pdJ8q9kCvw5S1tzD4Rw3fqvZGp4wVgQ8bOoDaW5a
/fD+cuwBzpX1ekuoTuBdo2O8tBiF8ZUHS9XpE/T2FZpEMfdSSRYGMpOTKdYU4Lg3dGQHwdyG8/FKv8U
bcjtf8ZJfsWrFyGJ93UX9bHvgrmUuFgL3L9PyzdOGFjsSYhvwJtibJBsqGUwaXTFbJsGbmKY+Vb8oHpsc
uq7nTdzHhSrPXHpk+VbZuZ8yKZoTC3pDFr1DfB8s3+jh5X8Q2RJDy33XrFX7OWAhdFhSUMSSXcDj0bVo
eTDO2f0Jf8hb/Y9jVvOw8NlHs5eS1DA1nMnmzdCmI4Iq2AUdGG9+fjXcqcVfnZ7XpHeB8lbpXYlkd+wNJ
C4xaT4Ms/JmewIf5ImoL5jR4eRhtY7ZwkpOp3hzLqmmZYHfHz5gfyfHH9Qf7Y9UsSkkAEvkgfTbfQkGD
OUyNN/Ej66Ba3oJXtHj7bknsbWuT4/IBvWPcTWxBKSk5hFRwRvTz+MNQn1dQrcNRl+7ydqVTe1e7GWiq5b
dn9yyHDlhVDUOGbBwtHiXc9Be1YjMC78Od7t3KpRHfa5x64WvHSVHZ1v8e6ExA3C2LZDz0Sq9lc6mUsNrD
AgsxGmdR6/8xDu+AhQXkRfh2GfjPGz3KFW/S9hRlWHtmPBnAPJH4dgeXNiQrPfmNXj/uJ7/7dsS2AD
ldWzKFNmLMzyEiUVOP/PcMyN39Cc/RvJ5YKZ6Xh3M9mDQQT9o+ZWi3zq+/4B0sT2ptd5Xyn2FKp8hwlMPa
jHVPf0x7xu6r6+N6U52wO6JBi4MzHhzGG+FxM7mmDEqBFMD8pxMS3Wb4Oo+7gbEmQ5yLifhjCYL4Fd43G
QYwHK0RMRA1QX5hIdg04BVsRKwt8vn/IOI9ix9vScVVrAsXrXrfqm7ThE+tvtMttzXgdIjnKGVaMiaYI7G
C9HNG7Yf3Vl0Q1n2C9DhI+fSkJIbSzPUNGGqD/2tVa6ulAzu69m2U9ZgP+OAZk1ZRg6sdmVaTS2S5ZEMN
YIMTFB1BXlqSd22XW1lZvGDoA1H3ZHRAZXJ+5+fh+sF4s/3pt6XPMiwmB2F1dbLMPTwRMvvdmWGWZlKN
cU5oEC6bSHSYgpoJDJgBkiE2VG4YmGgqBMnwa1W63MnZCcSKo6+m/+VjUL4YDY0cOwGS4+YuHfXQ1HfS
mHvD+GwhpcSTuaiDYz/2ld0W+fPo1H4LQbBsV3QhuBRQ4/OtMMe5LRtcUiWTUkpIzcEtT9yAM4uOdPmFLZ4
SGxLdp4vDW3mOMGpZeXkIuQDXbBmuxCKOUlK4C2rTHzXfhyp/zZ4kQmj03eUHgyCnWExl29eQjpMUrqh
Ctvu3h3m7RL3DxuRsOGEpQFt9dJUuPjqBBntEcwy6YpVYJAwOoOvUJgQjvPsCy1pIWrfjCUdZrzVgTebfBuk
KeiyAwt8rPM/QqAkmDHgPCJzEpbrzHZhrH64jvSxzEiy6YMx5zfMsmH2Bp27g8XNs5JfWiFj/RyhMVXl
2J4cpXyvARHNa4oRVGc6iVkWmRzaQYdWbVMA1vOo6Ye3AgUIRIJAwwBr1NzPmqMpzkePexdCM0eXd1X
MTAYCfP3YCwAqIrdK8N0kuwVZA1Aka2OY1z6GNn0kqh8hUnaCQDzUxhrxkxbVmfaDBwWpmvWFnxK+
LJEiSnFtUDKvBrd/QTKmG+wfXWaLFLh0a7c1A1RtRv6Cgpk5ccVaHg0YdHvQ/fJGFyqRzAvAQvYfgqJb
tBYp0+H5+TqwWe+8Y1aZ9ihyKYMdWsWx/MS/f0Ec9M4pZAkPxGu7JHqUdaqF9Vi8zLCXTE53+vHGeKLtb
B9IMQ1z7Y90aHG1Q/j5qe5g/xNwLP3AGJZwTVIaZ69bN3nPSzSyeA7vE9KoZUkOGw3BOGmFbJVf4zZtW/
pNz3tOxtMk9fOeCtCuGTwNNgJm6MqvbK5FbXAr4ZhbDUDDrw7dzN8V9P7yDZzWIwFJwR2tgbBwmuVu
PHWFGrPq+yAKUvMjNmaP1tlSJJMXg3/R+HCa9pqZfpWQ62gs6P3O+Qkr+0mVhhnYJs0qHrdUVnV9LO+
BJpb8+BoAbBbr1Gm4i2HWdJ93MUqXI/AZtHTeNbUvw3h8y3EYJSa6gCIvk0CRtrF2hDy0eLPXQk1Lb97I
tYiuE9PcNhQY2Kd/wH7BVjXIoJVW2sI8+Yy5m62+GaXN2DSkLkvCj+YS6I5dFmYXqRz8bVDrG1rjnvfXtk
yPvmAF3P/3sWrAU76ThCnTzU7mTkSuI/qkgvhc+kUGF5aXcOuXOtqOhnGQfj1Dob1LRmRBKhGq/zRUi6S
dtT3xLvwuCjONBuCDQXs4RQLfNX+OddGQXhdXiUwK5+o25njyGFEoDXl7/eEM1OIOBIRnPKbY7T9IPuj7
ev6QB26eRgb76Q4aCL0dgW9nSRr7kQl1pz8FUWKSzmjMXz8WG0tZHFBB/xPj4Nd0MpGgGUJM6yo+XdD
Kku2xGjZgWw0HxDmOv5eLq0SRsjkhxB3TfXNszyL2wGVxzV6+YlBXg+hGhW3Hl+XvLRMLj0UA4o2MJl0g9F
eRHDeqDWVPc5B4gQ/sz2D5ZvUWSXQrhZZbdnuwGWV7mL+tVCK0WZRsBRlBXkWyC0QcFSOVPvHtmT+x
rahoL/MPTTAfy/yG9XmMhdAMnNCBLLMCxGMyENOPtbnNoqCWn8DSRlOnLFTpI8QfLDyIgDXqLk18Hg/
ypZGQWCEoOyXqtw8rJsXj/wDnMjpd1w8hd9M7SqWESlhH0EA4fmvdE5BVXX/1EAyB7mVoUDncA3d6Ywpm
HE1cNBafQ2Dv3EAQ+3kwJq+GzfVBdaAXdP+EGKpzZbXq3fvVSdwR6hvmfzDtbXo4HU3/eH5XNhBojr6Zfkh
E8Sz6Pmu8Frr7pJZBfGkVHnkNb72lrYEWlNqPFaHQwHjNeflQjPCBjKfjewVfoXzGCpQvo9qoNXaWEONvb9
WlgIBKiK4tFHWy1mbKEdzeDxh6z9vExZXv9bJKJ2eJG9kOaO0lMEHoOTUyOM2eN5nFx4qDjvbR8MCcrtA
wexI3y0RBYlnNHhjZyf5XyyGN/lGRAP9AqGgLtSxCvWRtMmTCHXOVxBqEaFsO3U0D2hUYkaXpyuaefrEF
OKUN0vQbvHBNP4tqq/QCAOK0HO8YPbWcZQUNmYQKPl1WOgQvKxyjKbKrZ6qIFfRW2RSWcdiXO8V+SUK2+
Lim8AbgZtGeBxJ0h4YyVo9+wH9wCbgmIg4dQ/7fBT47Yg4KCICOBNYu4fHkiSNULOXc/4p8E5gDbCj2p3A
8pF2mJn3RsQtNNb82UZj2mjRSI8jSdozzV7VcwEwMzNH9IfcXcnMTwOfHo1jSZJGptmpnoeBSa0sRJJUj2
bP+H9J46qeKxhw+h6nXvCYkUgk2+G+rPiRJ41yzl3N+tdWFSJLqsdvgj4j/kZnvi1gHaVzF8xsy00cwStI4
M9wZ/4eqz+e1uhBJJ12G/yZuaH6/LOB+yNiPB2Au8LOhvk6SNHbt9nLO6gHVz9LlgNQx8XM0/4eqz+e1uhBJJ12G/yZuaH6/LOB+yNiPB2Au8LOhvk6SNHbt9nLO6gHrHr4+IayPi7GiYT+PyznfUU6Ik
aTQNN9XztzSWaFhB48EpnwACuCAzV7W4tn3aKX95SkuOe8/8e/b6GCd/9GujUMlL9V51cUuOK2lkhgv+
ozNzFkBE3EBjGeWjfFqWJI1fw925u3Xni2rt/T5DX5LGt+HO+F8XEc9Ur4PGU7OeqV5nZr6spdVJkkbdcFf1
TKirEElSPUayHr8kaS9g8EtSYQx+SSqMwS9JhTH4JakwBr8kFaYtwR8RIsdqXRK1IEB8R8RRkwq1d7+ESMGEb
C12j7c+DvM/PtEbE/cFCb6pCk4tQe/BFxMHAqcAlAZr4Zr4AvFB3HZJUqnZM9cwA0uIZwAe3/JQU1xwQACb+QGzbpVhZsWKqLqkq4IZwzM7PZd4YrFNJt6yP2ZrG0PG4+JUT

i5kVET0T09Pf311+lJO2j2hH8E4HXA3+VmScBvwA+NrhRZi7KzO7M7O7o6Ki7RknaZ7Uj+PtorPJ5b7V9C4
0fBJKkGtQe/Jn5BPBYRMysdp0JPFR3HZJUqnZd1TMf+Hp1Rc/DwKVtqkOSitOW4K8e29jdjr4lqXTeuStJhT
H4JakwBr8kFcbgl6TCGPySVBiDX5IKY/BLUmEMfkkqjMEvSYUx+CWpMAa/JBXG4Jekwhj8klQYg1+SCmP
wS1JhDH5JKozBL0mFMfglqTBtC/6ImBAR90XE0nbVIEklaucZ/4eAtW3sX5KK1Jbgj4hO4PePeAG9PeAG9rRvySVrF1
n/F8EFgI72tS/JBWr9uCPiPOAJzOzd5h28yKiJyJ6+vv7a6pOkvZ97TjjPwU4PyAYZYAZ0TETYMbZeaizOzOz
O6Ojo66a5SkfVbtwZ+ZH8/MzszsAi4E/k9mvqvuOiSpVF7HL0mFMfmdjOzjNzGbCsnTVIUmk845ekwhj8klQY
g1+SCmPwS1JhDH5JKozBL0mFMfglqTAGvyQVxuCXpMIY/JJUGINfkgpj8EtSYQx+SSqMwS9JhTH4JakwBr
8kFcbgl6TCGPySVBiDX5IKU3vwR8QrI+LuiHgoItZExIfqrkGSSStaOh61vvAz6SmSsjYhrQGxF3ZuZDbahFkopT
+xl/Zm7IzJXV62eBtcCRddchSaVq6xx/RHQAtZ3chZaVq6xx/RHQBJwH3DvHevIjoiYie/v7+ukuTpH1W24I/IqYC/xP4cGY+M/j9zP
yUmd2Z2d3R0VF/gZK0j2pL8EfEJBqh//XM/GY7apCkUrXjqp4AvgSszyr6r6+5fkkrXjjP+U4B3A2dExKrq49w
21CFJRar9cs7M/Ecg6u5XktTgnbuSVBiDX5IKY/BLUmEMfkkqjMEvSYUx+CWpMAa/JBXG4Jekwhj8klQYg1
+SCmPwS1JhDH5JKozBL0mFMfglqTAGvyQVxuCXpMIY/JJUGINfkgpj8EtSYdoS/BFxTkSsi4gfR8TH2lGDJJ
Wq9uCPiAnAdcDvAq8B5kbEa+quQ5JKK1Y4z/jcAP87MhzPzBWAJ8NY21CFJRYrMrLfDiHcA52Tmf6pevxv4
mZOYHB7WbB8yrNmcC62otdM9MB55qdxH7EMdz9DiWo2u8jOerMrNj8M6J7aikGZm5CFjU7jpGIiJ6Mr
O73XXsKxzP0eNYjq7xPp7tmOp5HHjlgO3Oap8kqQbtCP5/Ao6NiBkRsT9wIXBbG+qQpCLVPtWTmdsi4oP
AHcAE4MuZuabuOlpkXE1NjQOO5+hxLEfXuB7P2v+4K0lqL+/claTCGPySVBiDfxfxeGW1YiIv4wIh6KiAci4q6I
eNWA97ZHxKrq47TEWurNl3Vfsdz1+P5voh4sBqXfxx4d3xEzI6IFRGxxp
mozudq/rDrmzvF8RZ3f01jQ7HIyEfG2iMiI6K62z4qI3mo8eyPijPqq3gOZ6cegDxp/dP4JcDSwP3A/8JpBbf4
NcFD1+j8C/33Ae8/t4rg3Am9v/c3DsdzGXBW9XrqgHaO567H82UDXp8P/H31eiLwAPC6avswYMKAce5
u9/c3lse1ajcNWA78YOd4ASScBR1SvXws83u7vZ3cfnvEPbdhlJTLz7sz8z8ZbX5Axr3I2hoezye1ZnqxMy8s2r33
IB2pWpmPJ8ZsDkF2HkVx9nAA5l5f9VuY2Zur6Hm8aDZ5WT+GPhTYMvOhOHZl5X2b+c7W5BjgwIg5odcF7y
uAf2pHAYwO2+6p9u3I58HcDtidHRE9E/CAiLhjU9vPVdMY1Y/kfxijbm/E8Dng6Ir4ZEDfdFxFXVQn87OZ67G
M+I+EBE/AT4ArCg2n0ckSJBFxR0SsjIiFg77sK9U0z3+OiGhF8WPYsOMaEaa8HXpmZt+/mOm/mOG8DVmbmr0a/xN
Fh8O+liHgX0A1cAH1cNWD3q7JxO/e/B74YEa+Ea+u9n8c+JfAvwJeDxvRnRbWOB0OM50TgcAVNMbtaOCS6j3Hcz
cy87rMfDWNcflkktXsi8DvARdXnxtj7+vDb7/+4jMmDkTCTR+G/gPddW1Jwz
+oTW1rEREvBm4Ejh/4E/3zHy8+vI/4E/3zHy8+vwwjXnTk6rtDdnwK+ArNH61LMHejGcfsKr69Xsb8C3g9eB4DtgebtmTJ
cDO3zz7gOWZ+VQ1ZfZtXnf9unwW+QTnjudNw4zqNxvz9soh4BPht4Lh4BPht4LYBf+DtBG4FLs7Mn9RS8R8R4y+I
c27LISEXES8Dc0QurJAfsP3TnlEBHTgVOAh6rvOeM/nn3Pcuq/hPhh4Zq6aeM/4uoavpexYl/Hs/raQyJi5wqDZ+B4NjOexw7Y/D
1gffX6DmBWRBwUERBwUEROB04CHImJi9e+ViJgEmBiFn12e+V/vJ6kTbsc1Mzdn5vTM7MrMrMLhp/izo/M3si4hDgudBjmXl
PO4ofiTG7Omc75S6WlYiIzwI9mXKbjamIqcDN1VToo5l5PnAA88DcRsYPGD9Y/ycyHqkN/vQqwAFYB76v1
G2uTvRnPzNweEVcAd1UB3wtcXx3a8dz1eH6w+g1qK7AJeE/1tZsi4v4AtzPz9oiYAtxRhfwE4HvA9ocZyL0
OS47soHgWOAT0XEp6p9Zw86iRkzXLJBkgrjVI8kFcbgl6TCGPySVBiDX5IKY/BLUmEMfhUhXlwxdU1R8R
H6nuxCQiuiPiL1rc/wUDV8iU2snLOVWEiHguM6dWr19B487UezLz0zX1fyqZAfzhYDLwPHBpZQ6Ll+k6oA
P4JfBeGusILQU2Vx9vq8r4jXaZ+aPqB8QWGst83JOZf9iaEVHJvHNXXrcRcMh6tVPgc/bORHwJuquzjfDPwXX
gzq19Il5MnAj4E/ysyTIuIa4GLgizQewv5aZwFxEXOA/5aZZ0TjgTy/PuPiLsGt6OxHAU01oh5o8slq1UMfuk
3HQx8tVrrJoFJA967u1rA7NmI2Az872r/g8DsiJgKvJEXl50AeAmlS0U20u9nQVysZ/CpSNdwzHXiSxvpKO/0x
jYD//Wg84nHZGpCGrq++Y8D2Dhr/l/YDns7M4R4BOVy7XzTxLUh7zKt6VJxqYbe/Bq7Nl/6R62BeXIr3kpEct
3rq1U8j4t9V/UREvK56+1kay/oO105qOYNfpfpThzVC5nNa73FPqMHTEn/wCmcq/KHpqAwBqqgAcMnHYvsYUx+CWpMAa/JBXG4Jekwhj8klQYg1+SCmPwS1Jh/j/VtzIbO
GXeEgAAAABJRU5ErkJggg==\n"
        },
        "metadata": {
          "needs_background": "light"
        }
      }
    ]
  },
  {
   "cell_type": "code",
   "source": [
    "sns.lineplot(data['Diameter'].head(),data['Rings'].head())"
   ],
   "metadata": {
    "colab": {
     "base_uri": "https://localhost:8080/",
     "height": 296

},
"id": "flagL7-8K2Dn",
"outputId": "cdd68a29-e1c3-4e36-e0dd-d0c2dc7686c4"
},
"execution_count": 15,
"outputs": [
{
"output_type": "execute_result",
"data": {
"text/plain": [
"<matplotlib.axes._subplots.AxesSubplot at 0x7f39eee39ad0>"
]
},
"metadata": {},
"execution_count": 15
},
{
"output_type": "display_data",
"data": {
"text/plain": [
"<Figure size 432x288 with 1 Axes>"
],
"image/png":
"iVBORw0KGgoAAAANSUhEUgAAAYcAAAEGCAYAAACO8lkDAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAA
ALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6Ly
9tYXRwbG90bGliLm9yZy+WH4yJAAAgAElEQVR4nO3dd3xUdfb/8dcJnVCkBFCQKoKA1EiVXXXdFVxXmq
CgKIqigsh+18r626Ks369dURQEUVCXqqBiF8uitCX0Ih2kdwkCoST5/P6YiY4ZQkLIzL0zeT8fjzyYuXPn3rfjzzZz
cez/3XHPOISIiEirB6wAiIuI/Kg4iIhJGxUFERMKoOIiISBgVBxERCVPU6wB5UblyZVe7dm2vvY4iIxJSFCxfuc84l
5ee9MVEcateuTUpKitcxREREiipn9kN/36rCSiliEUXFEcze93M9pjZipBp
/zSz7Wa2JPhzdaTWLyIi+RfJPYdxTTH/eOdc8+PNcvIiL5FLHi4JybbBRyI1PJFRCRyvDjncI+ZLQsedqsqq
Q00xmNsDMUswsZe/evdHMJ1Io7T50zOsI4iPRLg4jgXpXAc2An8GxOMzrnRjvEu8Ctr6W0TOwJ5Dx
72OID4S1eLgnNvtnMtwzmUCY4DW0Vy/iIjkTVSLg5mdG/K0G7Aip3VFRMQ7EWvKamYTgcuAyma2DfgHcJmZNQcc
JmZNQccsBm4M1LrFxGR/ItYcXXDO9T7F7LGRWp+IiBQcXSErKSEtIiJhVBxERCSMioOIiIRRcRARkTAqDiIiEkbFQU
REwqg4iIhlGBUHEREJo+IgIiJhVBxERCSMioOIiIRRcRARkTAqDiIiEkbFQUREwqg4iIhlGBUHEREJE7HiYGav
m9keMwu7FaiZKeZpezuzcK6URJEJvUioOZlQb+Cvw9L/M750Y755Kdc8lJSUmRDSc
iIr8SzT2HekAdYKmZLQZqAIvM7JwoZhARkTyIWPcZ2TnnlgNVsp4HC0Syc25ftDKIiEjeRLIp60RgLtDAzLaZWd9
IrfSYSYk8/dkath9M49dkath9M49W+yVRMLB7h1OIH2nMQiUPOOSYv2MKfRnzHgSMnePO21
ZZZR1eReeJpEe5Pyhwmbiox9mP6N6HOpkTPpKPXq5kM2PZBJ5wMGkP5SQqUB5+0BSTRqTVvJhBsPoU8pXfoEK9aS8c0k0K
Iqzk0PskkyhhNI6QBI3bVmNuV9S0oj8pXJv49yWWXJXJ+Zx8ifjuKLa+GCIvBw1rb5bF33t3cgmgbsJNOkkb0pOWqPmQm9ejvatPBx
rNQjn6AtVFNk1GdEQa8NXU/kT+LYBzexomxNEDBGgFDEfKo4V9pkjH9skEpQZ6m8IgdthH5hpzXUMKMQEcJ4MvSJUYzUvVJzeS
i+Kh42zsgxgJAbhTVdvcNjwGMHmmx0l3kOEnWMMnfxTsRw/CiLDuLJX/8TBUAa0pB1u7OdEFS5OmMKCJ/NlH8UgR9S8YbIXw84
yFq+iTnK3kEJZFtDqbHy3VyBQMm5SU5S8kPGxhNCuQXdUnq/IkN3lZhwfnsXa2Ap9sWTDJuzTLxu9DHFrEXrULqO3CjnCN3lIYBk
kdqFMqCYWmFDQg/fsR4Fn3Ar4gWQ8wwa1ZGmSy/AkIO9d0YNYlq/CI/hMejy+4OTKy8yyQ/y9PzYjNmwbi3nxC0Oldl2JG7
E+Q6D9MWz3t5fG4/OsAE8Dbj6aQm+DC5Oz0MtygJnBOc39GZD6ROCy4cAh61/qeaMg3Ei63cIfhB1N6zuR+YN6U68k

3kd3O+wsbObQi9NBn0xUJeRLGmUfe2OcvxPT+gRSRBCJHPd+HJQNszW9H9eQ2Kd/qkiCOrvjb0yc0NPqnE4rvWGOdaJ65d
0CIMYmfmE3ym6DqMBNuytwb4fOmaU59wT6N1n7w84jEjJtB7uw7ShaSW5g3yQGedy3Dg8CSxuu4Z5ZoMUx0/vfOR7EXjB4RGT
vHxbDnk/5tI1C5YcG9J0zrwiK4mICrNKkOUCFP+RhOmWn6b2HK6/cqZoGOR66GxiH+uGeVgFCBADGrOiHPrBVRMQqO3m
Wp4R9Q64udk8MhL1O4i7bxJdr76JYK5IOWDc9EwGtpJ7y7VqI5qZbBebWhX1PnJzb+pMLG+jHw0DcxG3G+24u58ozjsx1A
wBjoVZ9dXYdGtvFqMJhErFjLJ/u+Eutqd1AQbx5MT8qqWbZKfP/+JNh8yWdfnQXPmm7WScHrJQTuwKkvvG5PXw
ezLWYSyMnZwjtmJt4XFsFTSFqiCYvN2kEBJVT3wNeRPWJdzWNiFYMsfN3EdKOZ7GbMbBQbMjAhqvKRVumIfLtnqJIqFv
M8Jms8p6wFIJmwwwZ2QS2ExGGLKfHmK/wCvZs/HtZqHzpeqJxuwM2QNS7wxG9iKYa9fsPAEqxkwB1v0qvjW0+RsyxgHm

"iVBORw0KGgoAAAANSUhEUgAAAYcAAAEGCAYAAACO8lkDAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAA
ALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6Ly
9tYXRwbG90bGliLm9yZy+WH4yJAAAgAElEQVR4nO3dd3xUdfb/8dcJnVCkBFCQKoKA1EiVXXXdFVxXmq
CgKIqigsh+18r626Ks369dURQEUVCXqqBiF8uitCX0Ih2kdwkCoST5/P6YiY4ZQkLIzL0zeT8fjzyYuXPn3rfjzzZz
cez/3XHPOISIiEirB6wAiIuI/Kg4iIhJGxUFERMKoOIiISBgVBxERCVPU6wB5UblyZVe7dm2vvY4iIxJSFCxfuc84l
5ee9MVEcateuTUpKitcxREREiipn9kN/36rCSiIiEUXEQEZEwKg4iIhJGxUFERMKoOIiISBgVBxERCVPU6wB5UblyZVe7dm2vvY4iIxJSFCxfuc84l

nRmDL6VJ9fKe5flD42pMvasd6ZmZXDdyLt+s2eNZFik4US0OZtYJeBC41jl3NJrrFokHX68OdFJdti2VZ3s247
nrm1OmhPfXsjapXp73BnWgZsXS3DZuAW/N3ex1JDlLkRzKOhGYCzQws21m1h8YAZQFvjCzJWY2KlLrF4k
nP3dSHbeAquVKMmPwpfRo5a/xHOeWL8XUu9pxRcMq/O39lTw6YyUZGskUsyL2J4dzrvcpJo+N1PpE4t
WW/UcZPHERS7elcnO7Wvz16otO2TDPDxJLFOXVvsk8/tH3vD57E1v2H+XF3i1I9MHejZwZXSEt4mMzlv6
6k+pjXU7dSdVPiiQYf/9TI4Z1acw3a/fSc9RcdqameR1LzpCKg4gPZXVSHTxxMfWrluHjIbl3UvWbvu1qM/a
WZLYcOErXl2ezfFuq15HkDKg4iPjM2t0/0eXl75i0YCsDL6vH5DvbUaNCaa9j5ctlDarwzt3tKJqQQK9X5/L5y
l1eR5I8UnEQ8QnnHJP+u4VrQzqpPpiPTqp+07BaOaYPas+F1cpy59sLee3bjbp5UAyI7a1OJE78dOwkgycu
5uFpv3RS7Vg/fi7+rFK2JJPuaEvnJtX410ff88h7KziZkel1LDkNDSEQ8diybQe5Z8Jith9M44GrGnD3b+sVeM
M8PyhVvAgjerfk6UprGPnNBrYeOMrLN7akXMliXkeTU9Ceg4hHQjupZmQ6ptwZmU6qfpKQYDzUqSFPX
deUuRv20+OVOWw9oOth/UjFQcQDB46coH9IJ9WP7r2UVrUi10nVb3oln8+b/Vuz+9Axur0ym0VbfvQ6k
mRzxsXBzCqYWdNIhBEpDOZt3E/n4bP4bt0+HuvSmFf7tuKc0oXvvszt61Vm+qAOJJYoyg2j5zFj6Q6vI0mIP
BUHM/vGzMqZWUVgETDGzJ6LbDSR+JKR6Xhh5lr6jJlHYvGiTB/UnpvbRbeTqt/USyrD9IEdaFajPIMnLmbE
V+s0kskn8rrnUN45dwjoDrzpnGsDXBm5WCLxZVfqMfqMmccLM9f93Em18XnedVL1k4qJxXn79jZ0a1Gd
Zz5fy/1Tl3E8XTcP8lpeRysVNbNzgV7AIxHMIxJ3vlq9m/unLuPYyQye7dnMdw3z/KBE0Sl816sZtSsl8vzMt
Wz98Siv3tSKComF73CbX+R1z+Ex4DNgvXNugZnVBdZFLpZI7DuRnsm/PlzFbeNSfNtJ1U/MjCFX1mf4Dc1Z
suUg3UfOYdO+I17HKrQsFo7vJScnu5SUFK9jiOTZD/uPMHjiYpbFQCfVLMu3pXJxDX8c6krZfIABby0k0zlG3
dSKtnUreR0pJpnZQudccn7em6fDSmb24ikmpwIpzrn387NikXg1Y+kOhk5bToLBqJta0alJNa8jxZzk2hWZP
rA9t41bQN+x83mie1PtdUVZXg8rlQSaEziUtA5oCtQA+pvZCxHKJhJTQjupXvhzJ1UVhvyqVSmRaXd34JLaF
blv6lKe/XwNmbp5UNTktTg0BS53zr3knHuJwEilhkA34A+neoOZvW5me8xsRci0nma20swyzSxfuzoifhRP
nVT9pHzpYoy/rTXXJ5/PS1+t595Jizl2UiOZoiGvxaECUCbkeSJQ0TmXARzP4T3jgE7Zpq0gMBx21hlkFPEt5x
wT47CTqp8UK5LAEz0uZmjnhny4bCe9x8xj3+GcvnakoOR1KOtTwBIz+wYw4DfA/5pZIjDzVG9wzs0ys9rZp
n0PFOqLfiR+HDp2kr9OW86Hy3bSsX5lnu3VjCplS3odKy6ZGXf+th61KpXmz5OX0PXl2bzR7xLqVy3rdbS4l
ac/b5xzY4H2wHvAdOBS59xrzrkjzrkHIhHMzAaYWYqZpezduzcSqxDJt6VbD3LNi9/xyYpdPNipAeNvba3CE
AWdmpzL5AHtOJ6eSfdX5vDtOn03RMqZ7PsmAHuBH4ELzOw3kYkU4Jwb7ZxLds4lJyXFT197iW2ZmYFO
qteN+qWT6sDL4ruTqt80O/8c3hvUgeoVStHvjQVMmL/F60hxKa9DWZ8ErgdWAll36HDo3IEUIgeOnOC+K
Uv4es1ermpclSd7NC2UDfP8oPo5pZh6VzsGT1zMX6cvZ9O+wzzc+SKKqEgXmLyec+gKNHDO6SyQFErzNu
5nyKTF/HjkJI91aUzftrV07sxjZUsW47Wbkxn24SrGfLuJH/Yf5YUbmlO6uO5hVhDyelhpI3BGt2sys4nAXKC
BmW0zs/5m1s3MtgHtgl/M7LMziysSXRmZjue/UCdVvypaJIFHuzThn39qxMzvd9Pr1bnsPnTM61hxIa8l9ii
B0UpfEjJ01Tl3b05vcM71zuGl6XmPJ+KdXanHGDJpMfM3HaB7y+oM69KExBL6q9SP+nWoQ81KpRk8YTF
dRsxmbL9kdb09S3ndc/gAGAbMARaG/IjEpa9W76bz8Fks357Ksz2b8Vyv5ioMPndFw6pMvas9ZtBz1Fy+
Wr3b60gxLU9bu3NufKSDiPjBifRMnvp0Na99t4mLzi3HiD4tqJdUJvc3ii80Oq8c7w/qQP/xKdw+PoW/XdOI
fu11GDA/TlsczGyKc66XmS0nMDrpV5xzul2oxI3QTqq3tKvF0BjopCrhqpQryeQ72/LnSUt4dMYqNu07wt+
vaURRXbV+RnLbcxgS/PeaSAcR8ZI6qcaX0sWLMuqmVjz56WpenbWRLQeO8lLvFpQteUbjagq10xYH59zO
4L8/hE43swSgN/DDqd4nEivSTmTw6IyVTFqwlVa1KjD8huZqmBcnEhKMoVdfRO3Kify/91bQc9Rcxva7hO
rnlPI6Wkw47X6WmZUzs6FmNsLM/mABgwkMbe0VnYgikbFm109cO+l7JqdsZdDl9Zg0oK0KQxzq3bom4
29tzfaDaXQZMZulWw96HSkm5HYQ7i2gAbAcuB34GrgO6Oqc6xLhbCIREdpJ9cejJ3nztY8cJU6qcazS+tXZ
trd7SlVPIHrR8/lk+U7vY7ke7mdc6jrnLsYwMxeA3YCNZ1zuspEYlL2TqrP9WpOUtkSXseSKKhftSzTB3ZgwJs
p3P3vRTzUqSF3/bauRjLlILficDLrgXMuw8y2qTBIrFq69SCDJy5m+8E0HuzUgLt+U08N8wqZymVKMOGOtj
zwzjKe/HQ1m/cdYVjXJhQvqr3G7HIrDs3M7FDwsQGlgs8NcM65chFNJ1IAMjMdY7/bxJOfrqZquZJMubM
drWpV8DqWeKRksSIMv745dSqV5sWv1rP1x6OMvLEV5UtrJFOo3EYraZC3xLT9h49z/9SlP3dSfapHM30J
CAkJxl/+0IDalRN56N1ldBsZuHlQrUqJXkfzDe1LSdyau2E/V7/4LbM37GdYl8aMukl/HcqvdW9Zg7f7t+HAk
RN0fXk2CzYf8DqSb6g4SNzJyHQ898Va+rwW7KQ6sD191UlVctCmbiWmD+xAhdLFuXHMfN5fst3rSL6g4i
BxZWdqGr3HzOPFL9fRvUUNZgy+VN05JVd1KicybWB7WtY6hyGTlvDCzLU4F9YxqFBRm0mJG19+v5v7py
7leHomz/VqRveWNbyOJDHknNLFefO2NgydtpwXZq5j074jPNmjaaHtr6XiIDHvRHomT366mrHfbaJRsJNq
XXVSlXwoXjSBZ3o2pW5Slk9/tobtP6bxat9WVCpT+K6FidhhJTN73cz2mNmKkGkVzewLM1sX/FfjCeWs/L
D/CD1GzmHsd5u4pV0tpg1sr8IgZ8XMGHT5BbzcpyXLt6fS7ZU5rN9z2OtYURfJcw7jgE7Zpj0MfOmcqw98
GXwuki8fLN3BH1/8ji0HjvJq31Y82qVJoT0EIAXvj03PZeKAthw9kU73V2YzZ/0+ryNFVcSKg3NuFpB9XFgXI
OvGQeOBrpFav8SvtBMZPPzuMu6duJgG1cry8ZCOXNVYLbal4LWsWYHpAztQrXxJbn79v0xZsNXrSFET7d
FKVbPagAO7gKo5zWhmA8wsxcxS9u7dG5104nvZO6lOHtBWLZgLSJVyhe+4el6cX7E079zdnnb1KvHgu8t
44pPVZGbG/0gmz4ayusA4sRw/YefcaOdcsnMuOSkpKYrJxI+yd1J967Y2PHBVQ93dqwBVLVfS6wi+Va5k
Md7odwk3tqnJqP9sYNCERaSdyPA6VkRFe7TSbjM71zm308zOBfZEef0Sgw4dO8nQacv5SJ1UxUNFiyTwr
65NqFM5kcc//p4do+cy5pZkqpSNz6Ia7T+7PgBuCT6+BXg/yuuXGLNk60H++OK3fLpiFw91asj4W1urMIhn
zIzbO9ZldN9k1u4+TLeX57B616Hc3xiDIjmUdSIwF2hgZtvMrD/wBPB7M1sHXBl8LhImM9MxZtZGrhs5h8x
MmHJnO+6+TC22xR9+36gqU+9qR3pmJteNnMvXa+LvIIjFwiXiycnJLiUlxesYEiWhnVQ7Na7Gkz2aqmGe+
NKu1GP0H7+A73ce4p/XNubmdrW9jvQrZrbQOZecn/fqbJ74SvZOqiNvaqnCIL5VrXzg/iBXNKzC399fyaMz
VpIRJyOZVBzEF9IzMn/ppFqiKO8N7KBOqhITEksU5dW+yfS/tA5vzN7MHW+mcPh4utexzpqKg3huZ2oafV
6bz4tfrqNHyxrMuOdSGp2nmwxK7CiSYPztmkYM69qE/6zdS89Rc9mZmuZ1rLOi4iCe+vL73Vw9/FtWbE/l

+eub8UzPZiSWUD9IiU1929bi9X6XsPXAUbqMmM3ybaleR8o3FQfxxIn0TB6bsYr+41M4t3wpPhx8Kd1aq
MW2xL7fXpjEu3e3p1iRBHq9OpfPVu7yOlK+qDhI1G3eF+ik+vrsTfRrX5vpg9RJVeJLg2plmT6oPRdWK8tdb
y9kzKyNMXfzIO2/S1S9v2Q7j0xfQZEEY3TfVvxBDfMkTlUpW5LJA9py35SlPP7x92zcd4THujSmWIy0fFFxkK
g4eiKdRz9YxeSUrSTXqsDw3i3UME/iXsliRXipdwtqVSrNK99sYOuBo7x8Y0vKl/L/8OzYKGES0wKdVGczZeF
W7rn8Aiapk6oUIgkJxoOdGvLUdU2Zv2k/142cw9YDR72OlSsVB4kY5xwT5gc6qR4MdlK9/6oG6qQqhVKv
5PN587Y27PnpOF1fns3CH370OtJp6bdUIuLQsZPcM2Exf52+nNZ1KvLJkI5cWr+y17FEPNWuXiWmDWxP
mZJF6T1mHjOW7vA6Uo5UHKTA/dxJdaU6qYpkVy+pDNMHdqB5jXMYPHExL325zpcjmVQcpMBkZjpGz9
qgTqoiuaiYWJy3bm9NtxbVefaLtdw3dSnH0/118yCNVpICsf/wce6bupRv1ElVJE9KFC3Cc72aUadyIs99sZZ
tP6bx6k2tqJBY3OtogPYcpADM2bCPzsO/Zc6G/Qzr2kSdVEXyyMy493f1GX5Dc5ZsPUi3V2azce9hr2MBH
hUHMxtiZivMbKWZ/dmLDHL2sjqp3vjafMqUDHZSbVtLnVRFzlCX5tWZeEcbDh1Lp/vIOczbuN/rSNEvDmb
WBLgDaA00A64xswuinUPOzs7UNPqM+aWT6oeD1UlV5Gy0qlWR9wZ2oFJicfqOnc87C7d5mseLPYeLgP
nOuaPOuXTgP0B3D3JIPs1ctZvOw79lxY5fOqmWLq7TVyJnq2al0kwb2IHWdSpy/9SlPPPZGjI9unmQF8Vh
BdDRzCqZWWngauD87DOZ2QAzSzGzlL1790Y9pIQ7np7BYzNWcfubKVQ/R51URSKhfKlijLu1NTdccj4jvl7
Ph8t3epLDk3tIm1l/YCBwBFgJHHfO5XjuQfeQ9t7mfUcYPHExy7en0q99bYZe3ZASRYt4HUskbjnn+GLVbq
68qGq+h4OfzT2kPTkW4JwbC4wFMLP/Bbw9uCanpU6qItFnZp7+rnlSHMysinNuj5nVJHC+oa0XOeT0jp5I
558frGRKyjZ1UhUpZLw6i/iumVUCTgKDnHMHPcohOVi96xD3TFjMhr2HuefyC/jzlfXVME+kEPHqsFJHL9Y
ruXPOMeG/W3hsxirKlSrG2/3b0OECNcwTKWw0/lB+lpp2kr9OW85Hy3fSsX5lnuvVXA3zRAopFQcBAp1U
75mwiF2px3i4c0MGdKyrhnkihZiKQyGXmel47buNPPXpGqqWK8mUu9rRsmYFr2OJiMdUHAqx0E6qnZt
U44keTWPi3rYiEnkqDoXUnA37+POkJRxMO8mwrk24qU1NNcwTkZ+pOBQy6RmZvPjlOl76ej11Kycy/rb
WXHSuGuaJyK+pOBQiO1PTGDJxCf/dfIDrWtXgsS6N1TBPRE5J3wyFxMxVu7n/naWcTM/k+eubqWGeiJy
WikOcO56ewZOfrOH12ZtofF45RvRpSZ3KiV7HEhGfU3GIY5v3HeGeiYtYsf2QOqmKyBlRcYhT7y/Zzl+nLad
okQTG3JzM7xtV9TqSiMQQFYc4E9pJ9ZLaFRh+QwvOUydVETlDKg5xJLST6uArLmDI79RJVUTyR8UhDqiTq
ogUNBWHGBfaSfU3FybxXK9mVC6jTqoicnZUHGLY4i0/MnjiYnVSFZEC59VtQv8HuB1wwHLgVufcMS+yxK
LMTMeYbzfy9GdrqFZenVRFpOBFvTiYWXXgXqCRcy7NzKYANwDjop0lFu07fJz7pizlP2vVSVVEIserw0pFgV
JmdhIoDezwKEdMmbN+H3+eHOik+q+uTbhRnVRFJEKiXhycc9vN7BlgC5AGfO6c+zz7fGY2ABgAULNmzei
G9Jn0jEyGf7mOEeqkKiJREvVB8GZWAegC1AHOAxLN7Kbs8znnRjvnkp1zyUlJSdGO6Rs7DqbRZ8x8XvpqP
de1rMGMwZeqMIhIxHlxWOlKYJNzbi+AmU0D2gNve5DF175YtZsHgp1UX7i+OV1bVPc6kogUEl4Uhy1A
WzMrTeCw0u+AFA9y+Nbx9Aye+GQ1b8zeTJPq5Xiptzqpikh0eXHOYb6ZvQMsAtKBxcDoaOfwq037jjBYn
VRFxGOejFZyzv0D+IcX6/azrE6qxYqqk6qIeEtXSPuAOqmKiN+oOHhMnVRFxI9UHDzinOPf87cw7MNAJ9V
/929De3VSFRGfUHHwQGraSYZOW8bHy3epk6qI+JKKQ5SFdlId2rkhd6iTqoj4kIpDlKiTqojEEhWHKAjtpHr
1xdX4v+7qpCoi/qbiEGFz1u9jyOQlHEo7yePdmtCntTqpioj/qThESPZOqm/1b03DamqYJyKxQcUhAnYcTG
PIpMUs2PwjvZJr8M9rG1O6uD5qEYkd+sYqYKGdVIff0JwuzdVJVURij4pDATmensH/fbyacXPUSVVEYp+K
QwEI7aR6a4faPNxZnVRFJLapOJyl9xZv55Hp6qQqIvFFxSGfjp5I5x/vr2TqQnVSFZH4o+KQD9/vPMQ9Exax
cd8R7r3iAu5VJ1URiTNRLw5m1gCYHDKpLvB359wL0c5yprI6qT724SrKq5OqiMQxL24TugZoDmBmRYDt
wPRo5zhTqWknefjdZXyyQp1URST+eX1Y6XfABufcD5FY+EtfruODpTsKZFn7Dh/np2Pp6qQqIoWC18XhB
mDiqV4wswHAAlCaNWvma+FJZUtQv2qZfIcL1ei8cvRrX5sW6qQqIoWAOee8WbFZcWAH0Ng5t/t08yYnJ
7uUlJToBBMRiRNmttA5l5yf93o5xKYzsCi3wiAiItHnZXHoTQ6HlERExFueFAczSwR+D0zzYv0iInJ6npyQds4
dASp5sW4REcmdLusVEZEwKg4ilhJGxUFERMKoOIiISBjPLoI7E2a2FzhVi43KwL4oxykIyh1dyh19sZo93nLX
cs4l5WeBMVEccmJmKfm9+s9Lyh1dyh19sZpduX+hw0oiIhJGxUFERMLEenEY7XWAfFLu6FLu6IvV7ModF
NPnHEREJDJifc9BREQiQMVBRETC+KY4mFknM1tjZuvN7OFTvP4XM1tlZsvM7EszqxXyWoaZLQn+fBAyvY
6ZzQ8uc3LwBkO+yG1ml4dkXmJmx8ysa/C1cWa2KeS15gWdO4/Z7zKz5cEM35lZo5DXhgbft8bMrsrrMr3
MbWa/N7OFwdcWmtkVIe/5JrjMrM+8io9y1zaztJBso0Le0yr4nvVm9qKZFfj9a88i943ZtvHMrG3ZD593y
Hw9zMyZWXLINN9u3znlLvDt2znn+Q9QBNgA1AWKA0uBRtnmuRwoHXx8NzA55LXDOSx3CnBD8PEo4G
4/5Q6ZpyJwIGS+ccB1PvjMy4U8vhb4NPi4UXD+EkCd4HKK5GWZHuduAZwXfAtOmnAAAAYOSURBVNw
E2B4y3zdAsk8/79rAihyW+1+gLWDAJ0Bnv+TONs/FBO4X75vPOzhfWWAWMC8rj9+379PkLtDt2y97Dq2
B9c65jc65E8AkoEvoDM65r51zR4NP5wE1TrfA4F9QVwDvBCeNB7oWaOqCy30d8EnIfNGQl+yHQp4mAl
mjF7oAk5xzx51zm4D1weXlukwvczvnFjvndgSnrwRKmVmJAs6Xk7P5vE/JzM4l8MU8zwW+Ad7Em208L7
l7B98bLXndFocBTwLHQqb5evvOKXdBb99+KQ7Vga0hz7cFp+WkP4G/krKUNLMUM5uXdWiGwP0iDjrn0
vO4zPw429xZbiD8rniPW+BQ1PMR+gLLU3YzG2RmG4CngHtzee+Zfh75cTa5Q/UgcJva4yHT3gjucv8tAod
nzjZ3HTNbbGb/MbOOIcvcltsyz1JBfd7XE76Ne/p5m1lL4Hzn3Ed5fK8vtu/T5A511tu3X4pDnpnZTUAy8HT
I5FoucOl4H+AFM6vnSbjTyCF31l9/FwOfhUweCjQELiFwyOmhKMUM45x72TlXL5jh/3mV40ydLreZNSbw
V9edlZNvdM5dDHQM/vSNVtZQOeTeCdR0zrUA/gJMMLNyXuTLSS6fdxvgqHNuRchkTz9vM0sAngPui+Z6
z1ZechfU9u2X4rAdOD/keY3gtF8xsyuBR4BrQyuic2578N+NBI6ttQD2A+eYWdbd7k65TC9zB/UCpjvnTmZ
NcM7tdAHHgTcI7GoWtDxlDzGJXw5Z5PTeM11mfpxNbsysBjAduNk5tyFresg29BMwgYL/zPOdO3h4Y3/
w8UICx6QvDL4/9DCl7z7voLA9Yx983mUJHJf/xsw2Ezhv80Hw5K6ft+/T5S7Y7bsgT6bk94fA7Uo3Ejj5k3US
pnG2eVoQ+KWon216BaBE8HFlYB3BEzjAVH59QnqgX3KHvD4PuDzbtHOD/xrwAvCER595/ZDHfwJSgo8b
8+sTdhsJnEjLdZke5z4nOH/3UyyzcvBxMQLnqe7yUe4koEjwcV0CXxYVg8+zn5C+2i+5g88Tgnnr+u3zzjb/N

/xyYtfX2/dpchfo9l1g/1EF8KFcDawl8EX6SHDaYwT+2gaYCewGlgR/PghObw8sD34oy4H+IcusG/zlWU+gU
JTwS+7ga7WDvzgJ2Zb5VfC/ZQXwNlDGo898OIETW0uAr0M3UgJ7QhuANYSMkDnVMv2Sm8DhjiMh/y+
WAFUInERdCCwLvm84wS9jn+TuETJ9EfCnkGUmB7eTDcAIgl0P/JA7+NplwLxsy/PF551t3m8IGc3j5+07p9
wFvX2rfYaIiITxyzkHERHxERUHEREJo+IgIiJhVBxERCSMioOIiIRRcZBCwX7p3LvSzJaa2X3Bq00xs2QzezHC6
+9qIV1tRfxOQ1mlUDCzw865MsHHVQhcJTrbOfePKK1/HPChc+6d3OYNeU9R90tvMJGoUnGQQiG0OASf
1wUWELiq/rfA/c65a8ysNYGLhEoCacCtzrk1ZtaPQFuIRKA+8AyBK1j7AscJXJl8INjX62UCVzUfBe4g0B/rQy
A1+NMjGONX8znnVgeLyDECV9bPds79JTKfiMjpFc19FpH445zbaGZFCFxBGmo10NE5lx7sifW//PJl3oTAl3
ZJAlfdP+Sca2FmzwM3E2h1MppAa4J1wYZzrzjnrrDATah+3nMwsy+zz0egxTwE+um0d85lROg/XyRXKg4iv
1YeGG9m9Qncl6BYyGtfu0Djsp/MLBWYEZy+HGhqZmUItHOZGtIROazdeh7mm6rCIF5TcZBCKXhYKQPYA
1wU8tIwAkWgm5nVJtC7JktoR93MkOeZBH6XEgjcQyS327rmNt+RPPwniESURitJoWNmSQS69I5w4Sfdy
vNLi+R+Z7JcF7gj2iYz6xlcj5lZs+DLPxFot5zbfCK+oOIghUWprKGsBDrlfg48eor5ngL+z8wWk7896xuB/ma2l
EAHzKxbPE4CHgjeza3eaeYT8QWNVhIRkTDacxARkTAqDiIiEkbFQUREwqg4iIhIGBUHEREJo+IgIiJhVBxERC
TM/wcwQdWkuLVtVQAAAABJRU5ErkJggg==\n"
        },
        "metadata": {
          "needs_background": "light"
        }
      }
    ]
  },
  {
   "cell_type": "code",
   "source": [
    "sns.boxplot(data['Sex'].head(10),data['Diameter'].head(10),data['Rings'].head(10))"
   ],
   "metadata": {
    "colab": {
     "base_uri": "https://localhost:8080/",
     "height": 296
    },
    "id": "EAaqJPr6K5No",
    "outputId": "6d9d1ace-6afd-4d55-c626-ba010d1dbe0a"
   },
   "execution_count": 16,
   "outputs": [
    {
     "output_type": "execute_result",
     "data": {
      "text/plain": [
       "<matplotlib.axes._subplots.AxesSubplot at 0x7f39eee24f90>"
      ]
     },
     "metadata": {},
     "execution_count": 16
    },
    {
     "output_type": "display_data",
     "data": {
      "text/plain": [
       "<Figure size 432x288 with 1 Axes>"
      ],
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAY4AAAEGCAYAAAByS3LJAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAA
ALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6Ly
9tYXRwbG90bGliLm9yZy+WH4yJAAAgAElEQVR4nO3de5QV5Znv8e/P5q6I3CW02CSioqgIHZisHDGj4kA0
QNCgxEQMjBwzErxHMiaOAgyaDd0PSSZSIMjHKYLzAiXJIdMRkkkOkOiRgVFoqIAWQQGmJEFG3ynD92NbNp
m+5d9i6apn+ftfZi11tvvfup1Uuf9V7qLUUEZmZmhTqoqQMwM7PmxYnDzMxCSceIwM7NUnDjMzCWwVJw

4zM0ulVVMHsC9069YtysrKmjoMM7NmZdmyZVsionvt8haROMrKyqisrGzqMMzMmhVJb9RV7qEqMzN
LxYnDzMxSceIwM7NUWsQch5lZlj788EPWr1/P+++/39ShfCzt2rWjtLSU1q1bF1TficPMrJHWr19Px44dKSs
rQ1JTh5NKRFBVVcX69evp27dvQdd4qMrMrJHef/99unbt2uySBoAkunbtmqq35MRhZlYEzTFp1Egbu4eq
zA5AM2fOZOHChezYsYO9vTpBEh06dABg5MiRTJ06dV+GaM2YexxmZvtQSUkJAwcOZMCAAXzhC1/gL3/
5CwBvvvkm5557bhNHVxi1hBc5lZeXh58cN7OsrFy5kv79+xdU95BDDmH79u0ATJgwgaOPPPprrrrsuy/AK
Utc9SFoWEeW167rHYWbWRD7zmc+wYcMGANauXcuAAQMAuP/++xk7diwjRoygX79+fPOb39x9x9zb333
svRRx/NkCFDuPjii5kyZQoADz/8MAMGDOCkk05i2LBhmcbtOQ4zsyawa9wa9cunn76aSZNmlTn+eXL/P888/
Ttm1bjjnmGL7xjW9QULCjTfeyB//+Ec6duzIaaedxkxkknnQTA9OnTWbRoEb179949/JUV9zjMzPah9957j4E
DB3L44YezadMmhg8fXXme9008/nU6dOtGuXXTuuOO+443njjDZ577jlOPfVUunTpTpQuvWrfnSl760u/5nP/tZL
rroImbNmsWuXbsyvQcnDjOzfah9+Ysyv7+/YsX76bd/b/b2kpYgoqKiznpt27bd+wkUce2eDY+kKc/zbPPPuduorq7mkUce2X3tutdde+YQoU
yfPp3u3buzbt26rEL3HIeZWVM5+eSTOfHEE3nooYc45ZRTGqzfu5+zV/+3YOOQzQQqqur+eIXv8jEiRP54he2/Oh2vRzXzOwAd
Nddcw6uvvkpEcPrpp++e+8iCl+OamTVSmuW4W4jbV9+3YOOeQQqqur+eIXv8jEiRP54he2/Oh2vRzXzOwAd
cMNN+x+gLBv376MGTNmn8fgoSozs2bkttua+oQ3OMwM7N0nDjMzCyVTBOHpBGSVklaLWlaPfXOkRS
SypPj4ZKWSXox+fe0vLqLkzaXJ58eWd6DmZntKbM5DkklQAUwHFgPLJW0ICJW1KrXEbgM+ENe8RbgCxH
xpqQBwCKgd975CyLmJpAlpPjQ4DVEbEGQNJcYDSwola9G9G4GbgWtqCiLi+bzzLwPtJbWNiJ0Zxmu2
36p5vwZQ0Ds2/H6NpnXp5VezacvWorXXs1sXKu6qf1J81apVnHfeebuP16xZW/Tp07n88suLFkeNLBNHb
yD/0cX1wND8CpIGAUdExBOSrqFu0O0C3GEuCnq+K9I0mRgMkCfPn0+/l2YmaW0actWXu/1u
eI1uHFxg1WOOeYYli9fDuQ2UOzdu3dRnu+oS5Mtx5M6/4goj5M6/4gojYkAxxPQJ8Ffj32td
GxD3APZB7ALB4kZvte1OnTnUPwgr29NNP86lPfYojjzwyk/aznBzaBzfABydRd1yalNXoCAwAFktaC/wdsCBvgr
wUeAy4MCJeq7oIjYk/74DPEhuSMzMzMzBJz585l/PjxmbWfZeJYCvST1FdSG2AcsKDmZES8ExFdI+KoiDgKeB4
YFkhs5wRWoEq/p5ujfTGHqWkdNtdSSXnz7ehm6U7lf26vBRhz6p9MXuFMyVOxWzDWY/kozfT8d+lXlYeMqr6yyoKhwuZ1xSFsBqaj5TT0Lq
NrMs7Xp+U7SZpEHBERDxR4Rx4LUNtpnX9mRJlZIqN2/e/PHuwMqLJJsclHQTcAyVRfsRcU9ElEdEeffu3F
bP4CTOzFinL5zg2AEfkHZcmZTU6AgOAxZIADgcWSBrVwLX1X1tWbm1Zez649eHtP6y3z
ve//31mzZpFRHDxxRdxdRx+eWXF+33a8sycSwF+knqS649Rp7/dWe10vXRaWyVWA36b+oqHzAcTz/suXQiA/tUtgYqNIBNeQOOwcbV3bhqe2Wp3ugwzLJUdR3gjc7+LaZzbP/K7mrV69jd2R
4P+A5QPW1aWa2P9hUtYk3B79ZvAaX1X/6pZdeYtasWTz33HO0adGESNGcPbZZZ3PUUUcVL4Y8mQ1V
RUQ1MAVYBKwE5kXEy5KmJ72zK+q59GZGrHrAD+L3BpROzaW5tZ3YOZWXOwcuVKhg4dSocOHWjVqhW
nnnoqjz76aGa/l+mWIxHxJJPBkrbrLr91L3c7WOvwvt8t5A2zcxasgEDBnDdddRVVFF+/btefLJJykvLy9qjvkGVybQ8eKuPn
varMzJq5/v37c+2113Mmw1y8MEHM3DgQEpKSjKL3tYPW85YmZ2AjQ0aRLLi3jN7/5DZ07d+boo49uKP
yT0OM7MDwFtvvUWPHj3485//zKOPPsprr736NvWyxuPYk
HXZY8QKoxYnDzKzIGnrmlgu//e1v99lveHzweY7DzMxceIwM7NUnDjMzCsVJw4zMzBy...

4zM0ulVVMHsC9069YtysrKmjoMM7NmZdmyZVsionvt8haROMrKyqisrGzqMMzMmhVJb9RV7qEqMzN

vdbqFzHM9LWgA8DLxbUxgRjzY6AjMzy0TPnj13f7/44os5++yzi9JuoYmjHVDFnluCBODEkQFPpptZMWzc
uHH3GwAfe+wxBgwYUJR2C0ocEfG1ovyamVkL0LVb54JWQqVpryF1bau+ePFili9fjiTKysq4++67ixJPQYlD
0tHAj4GeETFA0onAqIi4qShRmJkdQBp65iILDz300EfKJk2alMlvFbocdxbwLXJPeBMRfyK3hYiZmbUwhSaO
DhHxXK2y6mIHY2Zm+79CE8cWSZ8iedGSpHOBjZlFZWZm+61CV1VdCtwDHCtpA/A6cEFmUZmZ2X6r0M
QREXGGpIOBgyLiHUl9swzMzMz2T4UOVT0Cud1pkxcoAfwim5DMzGx/Vm+PQ9KxwPFAJ0lj804dSu6hQ
DMzq+XKqd9gy+bNRWuvW/fu3DHzB/XWqWtbdYAf/OAHVFRUUFJSwllnncUtt9zS6HgaGqo6htxb9g4D
vpBX/g5wcaN/3czsALRl82aOKSnewtNVBSShurZVf+aZZ5g/fz4vvPACbdu25a233ipKPPUmjoiYD8yX9JmI+
H9F+UUzMyu6YcOGsXbt2j3KfzvjzHHzNt2jTatm0LQI8ePYryW4XOcVRJelrSSwCSTpT07YYukjRC0ipJqyVNq+
P8JZJelLRc0n9n9JOi4pL5P0XlK+XNJP8q4ZnFyzWtJMSSrwHszMWpRXXXnmF3/72twwdOpRTTz2VpUuXFqX
dzJ4cl1QCVAAjeOA8TWJIc+DEXFCRAwEbgHuyDv5ZL5Dz5Ld6BEEvSNM2xNqTmTixIkMGDCANm3ax3TAUwDJgu6cPk9
y6JiK3JuX8C7gfaAwuTj5mZ7SMFv3M8Iq5M23hEPEku6eSXXZ/3/bK9XPcIyf5YdZyrBIrz4lwzM0ut0FVVP
5N0saRekrrUfDKNzMzM9kuF9jg+AG4FruN/nrUI4JNZBGVmZvuvQhPHVcBREdH4J0fMzKxZKrBxrAZ2ZB
mImdmBYtqV3+TtLduK1l6nbp2ZcUf926HXta36c36Cy+8wCWXXXML27dspKyvj5z//OYceemij5sWXcbwLLJf0D
MnzFdDgclwzsxbp7S7yhzpzsxbp7S3bmHrM+k2dx4442NjqfQyfRVNcw+8hA
Hge8CvweW5X3MzGw/MGzYMFGzYMLp02XPN0iuvvMKwYcMAGD58Ooi1dQKfXJ8TlF+zczM9pnjjz+e+f
PnM2bMGB5++sWrPzUKHjIamfpF9IWiFpTc2nKBGYmVkmZZs+ezKBGYmVkmZs+ezY9+9CMGDx7MO++++bMxs
SbqFzHPcB/wLcCfw98DUKH+YyM7MmcOyxyx+xwd/0KyA1bPfHEE0Vpt9D+/+bePiKcBRcQbEXEDub2ZmEDub2lzMxs
P1XzjvG//e1v3HTTTTVxySUNXFGYQnscOyUdBFRKuhyoAfr99TJDZ7WAAbCqdCWHBsA7hDl1ZDL4/R3qPtZ3v5sRHVJXb7nr/b3L0bcWc5Pz1FqHnWXzNFKC8qIMvc
RUUFAGPHjuVrX/taUeJRIa8RlPRpYCVwGHAj0Am4JSKWFCWKjJWXl0WFv/ZJNRoxHD6fmB6iV6iVK1fSv3//pg6jWR0i
q6B0nLIqK8dt1CV1XVvOF8O7n5DTMza6HqTRyS7oqIyyX9X9H+p4oauMxOsMjMz2y811OP4WFb5BngUbTbSgqrQHBLmxe
mZmzUO9iSMiliX/Ppu8lY+IKN6LdMNlpcDmupBskbBQFWAa9I2izp+oauMzOz1O9iUPSlcBngU9HRJ
eI6AwMBT4r6Yp9eaCZme1fGprj+CowPt+Re5J8J8rySNAL5P7p3jP42IGbX0OXwJcCuwit2Jrck
SskDQcmAG0IfcSqWsi4j+TaxYDvYD3kmbDO3kmbOjIi3CrhXM7N94oorrmDjhg1Fa697ee93l7F161q5dS1lIZGfPmzaNz54afC6lPQ4mjdV0vb4qIzJa13ehpBKgAhgOrAGOrAeW
SloQESvyvyqj0ET9J6o8gBGAFuAL0TEm15tIZm6P4rNnZJcKWbsEvJ3kPF7FgKM1n86rbASaVGbezCbSzDq5s5SKR1qG9APAHh+Vlwnx
7QIeAW6KOh5/lzQmzZAzQp0+fBkI1MztwrF27ueHjQ4eyvhN56UP5r3G2GN5EaAJG1+FP2m+O2EBPz7xfxGPpJG2p56WH5nA1iWRFpUdKZsqFyDR4x4
r+HSMiHqHqgoVERUR8SngWuDb+eckkHQeVuwNenctheTHNI5I3gGsRMnHhdYoVPyB6D8wHhzoa34dXxakiY
HPOOdx1110feU2sJCQ1+jey3BbWA6TEfn3FqBDOLmSHA+rWYmHnfPPPmZzc2hcGHpoGDRtE7N7I6+xQfYrY2Vo59h3A96Q8RdDoa8m5Yc
8MPP+Scc87hggsuYOOzYsQD07NmTjRs3ArBbx40Z69OjR6N6M/JmnPHD+4OjhLR/6N+fQNd/SnodSGsIO+kg6iZm8iWXbu6lAPtzrA1cgTdQsF0VpPfdsdH9kqbnB
BTwDTIuJ3efVbSeqWfG8NnA28lOE9NmJk1cxHPlJ+P1deeeXu8lGzlSAKfhwZY5W1mxJmzvCmOG6yWPmeeGmAPzoESRtlyRu4FPZDyWCAgYZvcwf/
W6rnlpEVCdbsC8itxx3dkS8LGk4BkCR4Apks4APgS5S2ARoSy6cSRoRWfWcsCbwLrAoSROlwFPArKzxwcuzs
4+jatWtBK6HStNeQ3/3ud/zsZz/jhBN0YQ0QB873vfY9q0aYwN457772XI488kt/85jdNHkqk2b=FpkQHIDIDHB4GiUq3bcl5d5cJ5vJFZL37d0BHh1kEOyI0XO
4WnrpoUlnp0YbgyVl29I4mBqVz9IoDUJ0mr3tovE8VLFfmOHVOSkO0/3vlKTQXLJoKaJUx0K1xTQXJL3O4YbN8t0UxHPVmrMjVfBKXcWKK4IJSPJpGVfu5XyEWrl9KL
26mWWppW2r7te/mplZKk4cZmaWihOHmVkRNOdh/7SxO3GYmTVSu3btqKqqatKqaabJlyKoqqqiXbuGnXmwTBuDfrNKDsrXh5m9p6xlWvQGDZY
H5mtqjIzaylKS0tZv349zRwVt9zmz3c3VTvL3iNzUXMEWRzUHT1tIU5Pvzfz9JNczEyn3NZnv2+xRlDQq2OEQ7RMOHWEnWQUa7YCU4AjNVcsNczK
MLBUnDjMzS8WJw8zMUnHiMDOzVJw4zMwsFScOMzNLxYnDzMxSceIwM7NUnDjMzCwVJw4zM0sl08
QhaYSkVZWS5pWx/lLL0oabmk/5BKJXS5bpdZaa/5J0X4XJ4MCJOiIiB
wC3AHcm1xwHjgAFxXY5xD3MsFDDOchBNh2zsw5lMmbFhSAv5JQ8FrYrgJWxLDd8gCH8BmCxSqCt9tqAowAPpo7OG2hAsGb4WvQaQlrTFBzrxzhPDiRDqBrzqA1ZtZj3LwZ3g
Yn7dFQm2Z2YJs5cyYLFy4EYMeOHXt9eZIkOnTowMiRI5k6deqN+DPGAl2Xi6A2syzteDwytXUnSpcCVQBvg
tLxrl9S6tnfyvcE2k3YnA5MB+vTpkz56MzOrU5O/yCkiKoAKgOPjJEnGpqhjmu8Ss0aWoCWrhl7wE1oAdbrulE
3qHkQTyzJxbACOyDsuTcrqrSOpNdAZqGrgurrKq4BDk2vU91t+1LGmxQMLwI/lqRNBHbb82oO2sQGoGTpVlLtgJSp4XaVhgMvRFS4rlNFqj1
tpL5AP+C5Qto0M7NsZdbjiIgPJV0OLAZKgHsj4mVJ04GKiFgA3APcL2k1sIlcIiApN4cVgE7vAAm4xGRHaMagHJSYm5K
qHszM7KO0txxUJB5Ly8vKorKs6jDMzJoVScorx2uZ8cNzOzVJw4zMwsFScOMzNLxYnDzMxSceIwM7NU
nDjMzCwVJw4zM0vFicPMzFJx4jAzs1ScOMzMLBUnDjMzS8WJw8zMUnHiMDOzVJw4zMwsFScOMzNLx
YnDzMxSceIwM7NUMk0ckZIWiVptaZpdaxvjnJXmi5pP+QSiV0uW6XWWmv+SdF+FyeDAiTWcv9ndgIvbOmw6s0iAHPYX3IhaHPaILbqj0EPYHkNDJMm9
yuyd45JKgApgOLAeWCppWpQUKv2PFAeEtskfR24BFwA7ku+adrpTLb5t4KoGdHF0rF5/LqzdGB7X8gL3x9y+TMp2eL0YXytrGqBbOcYRqMb7ixL6bzYhlNszIS1G3OVzOvR
Ksjog1EfEBMBcYvUed0cA5yfE84DRJSsrnRsTOiHgFWJ1cr87z/oxchpWzyhbxtfBPKOzPF5G6XvalRGg5MoOaSLK6sPJxKqp5aYKs2qAmNbDiHFByxyWhMN5Fuw
kto0L08zM0tgvJsclfQUoB26bz5ORIPGPUx4NxqbOWVj3bh3akSmyBkBuhzFP5RxYzu2k4KmZz4NfyVPN7IyPfkpgxJgxaKAFnfARgyWFtR6rxnbpPUP4B5SN2uoMlE5nhxU9gtoJQTPYSV7LBe8jSPDkIWKpB

d1yalO1B0hnAdcCoiNhZ6/Q44LGI+LCmICI2Rs5O4D5yQ2IfERH3RER5RJR37969kbdiZmY1skwcS4F+kvp
KakNuyGlBfgVJJwN3k0sab9XRxnhqDVMlvRAkCRgDvJRB7GZmtheZraqKiGpJU8gNM5UAsyPiZUnTgcqIW
EBuaOoQ4OFcHuDPETEKQFIZuR7Ls7Wa/rmk7oCA5cAlWd2DmZl9lCKiqWPIXHl5eVRWVjZ1GGZmzYqkZ
RFRXrt8v5gcNzOz5sOJw8zMUnHiMDOzVJw4zMwslcxWVTVHM2fOZOHC3MPrO3bsoK6FA5Lo0KEDAC
NHjmTq1Kn7NEYzs6bmHoeZmaXi5bhmZlYnL8c1M7OicOIwM7NUnDjMzCwVJw4zM0vFicPMzFJx4jAzs
1ScOMzMLBUnDjMzS8VbjphZk/N2P82LexxmZpaKtxwxM7M6NcmWI5JGSFolabWkaXWcv1LSCkl/kvS0
pCPzzu2StDz5LMgr7y7pPSTDz5LMgr7yvpD0mb/yGpTZb3YGZme8oscUgqASqAkcBxwHhJx9Wq9jxQHhEnAr8Absk7915E
DEw+o/LKbwbujIijgG3ApKzuwczMPirLHscQYHVErImID4C5wOj8ChHxTETsSA6XAKX1NShJwGnkkgzAHG
BMUaM2M7N6ZZk4egPr8o7XJ2V7MwlYmHfcTlKlpCWSapJDV+AvEVHdUJuSJifXV27evPnj3YGZmX3EfrE
cV9JXgHLg1LziIyNig6RPAv8p6UXg7ULbjIh7gHsgNzlezHjNzFqyLHscG4Aj8o5Lk7I9SDoDuA4YFRE7a8ojYk
Py7xpgMXAyUAUcJqkm4dXZppmZZSfLxLEU6JesgmoDnAyK8g6WTgbnJJ46288s6S2ibfuwGfBVZEbu3
wM8C5SdUJwPwM78HMzGrJLHEk8xBTgEXASmBeRLwsabqkmlVStwKHAA/XWnZ7PLBE0QvBAAOKh7iAB1YX2LoawvqLPXJjhLzAEUkeddBmWnC/ExumWvY71kc3w5mxUy9frAd8nubOPRLfwU/Ws+2Pu8aP4GqC3rK7IyJrXGQ
64FrpS0mtycx71Z3YOZmX1Ui3gAUNJm4I2mjiND3YAtTR2EfSz+2zVvB/rf78iI6F67sEUkjgOdpMq6nu60/
Z//ds1bS/37ea8qMzNLxYnDzMxSceI4MNzT1AHYx+a/XfPWIv9+nuMwM7NU3OMwM7NUnDjMzCwVJ4
5mSFJIeiDvuJWkzZJ+2ZRxWeFqvW9muaSypo7J0pG0valjsL+XZcjCr7xSaHltq7wABJ7SPiPWA43rOruXkvIgY2dR
BmH4d7HM3Xk8BZyffxwENNGIuZtSBOHM3XXOB8Se2AE4E/NHE8lk77vGGqx5o6GLM0PFTVTEXEn5Jx8
fHkeh/WvHioypotJ47mbQFwG/A5cjsFm5llzomjeZtN7lW6L0r6XFMHY2YtgxNHMxYR64GZTR2HmbUs3n
LEzMxS8aoqMzNLxYnDzMxSceIwM7NUnDjMzCwVJw4zM0vFicMsY5Kuk/Syp/SypD8lW4wMbeqYzHZFQLgA
AAFMSURBVBrDz3GYZUjSZ4CzgUERsVNSN6BNE4dl1ijucZhlqxewJSJ2AkTEloh4U9Jgc9JgSc9KWiZpkaRekjpJ
WiXpGABJD0m6uEmjN6uDHwA0y5CkQ4D/AjoATwH/AfB4KCJGNF
HoZnvloSqzDEXEdkmDgVOAvyeXOG4CBgC/lgRQAmxM6v9a0a0peACuCkJgnarAHucZjtQ5LOBS4F2kXEZ+o
4fxC53kgZ8PmIeHHfRmjWMM9xmGVI0jGS+uUVDQRQRWAt2TiXMktZZ0fHL+iuT8l4H7JLXepwCbFcA9Dr
MMJcNUPwAOA6qB1cBkoDRwJ5sbKoJTczsadyA0Z3wX8BngcGBIR70i6A3gnIv6lKWI32xsnDjMzS8VDVWZmlooTh5
mZpeLEYWZmqThxmJlZKk4cZmaWihOHmZml4sRhZmap/H/L6w0TvGBXrwAAAABJRU5ErkJggg==\n"
        },
        "metadata": {
          "needs_background": "light"
        }
       }
      ]
    },
    {
     "cell_type": "code",
     "source": [
      "fig=plt.figure(figsize=(8,5))\n",
      "sns.heatmap(data.head().corr(),annot=True)"
     ],
     "metadata": {
      "colab": {
       "base_uri": "https://localhost:8080/",
       "height": 410
      },
      "id": "PtmMdK8zK7nX",
      "outputId": "83103c76-88d6-4254-9f13-57674df9e651"
     },
     "execution_count": 17,
     "outputs": [
      {
       "output_type": "execute_result",
       "data": {
        "text/plain": [
         "<matplotlib.axes._subplots.AxesSubplot at 0x7f39eec36d90>"
        ]
       },
       "metadata": {},
       "execution_count": 17
      },

```
{
 "output_type": "display_data",
 "data": {
  "text/plain": [
   "<Figure size 576x360 with 2 Axes>"
  ],
  "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAgQAAAF4CAYAAAArCuGxAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAgAElEQVR4nOzdd3gU5drH8e+dQg2B9NBbgECAAKFJE6QJKohwA
BvHgiKKDdFXESwowlEPCgICImJBj4L1iCLSjLQQIHQRCB1SCCQk1CS7z/vHLsluKCGcLJvV+3Nde7G7c+/sb4
fZ7DPPPDMjxhiUUkop9ffm5e4ASimlHI/GAsIiSimlHNGgsICyiFdeaEa9I3+XNxxXyv5e99qZC6w7B1818wyxgzq/hSXZo2CJR
SSilXsVqK/BL7j///2gA4AlR3eFzN/txl6S4DpZRSylWMtei34vEDMMR+tEFb4KQxJulKL9AeAqWUUspVMX
2A+9ERL4AOgPBInIYeBnwBTDGzAB+AnoDe4AzwP2FzVMbBEoppZSLmOLb4i8wX3NnIdMN8FhR5qm7D
JRSSimlPQRKKaWUy7hol4EraINAKaWUchUchUX7TJwBW0QKKWUUq5yDYcduos2CJRSSilX0R4CpZRSSukYA
qWUUkq57LBDV/hLNghE5JQxxs+F838K27mlz1yP97saY96YROyqdQQGVOK7z2a4M0qelXEbmDhlNharh
f639GDoPQOcph9NTmXsxCmcyDhJRf8KTBwzkvDQYAAmvT+X2LXrARg2ZBC9una8LplX/XmEN39ch9Vq
6NeqHg90buI0PSnjFGPnryLrbDZWY3iiZws6RlYDYFfSCV7/di2nzmfjJcK8x26ltK+3S/N64jJeGb+Zf834FIvF
yh29OjN0UB/nzCnHeGnSB5w4mUnFCn5MeG444SFBrNu0nTdnfpZXt+9QEm+OHkHXdi1dn3ldAv+a9hE
Wq5U7endl6J39Ls781jROZGRS0d+PCS88SXhIEACTZn5KbNwGrMZwQ0xTnn/sAURcctr8/LxxG5g4eRYW
q5X+t/Zg6D3/cM6bnMrYCe/m5Z04dpTDevERsWviARj2z8H06trJpVkvCO3SlCavDQFvLw7OW87uqf91m
l59UCeiXrqLc0m2C/ztnbOYg5+vAKDt5/9HYEwEx9f9Sdy9b1+XvFdNewj+8p4CPsN29qcS4fbe3bmrfx9Gv
1YyvgwWi4XX35nJB5PGER4SxKCHn6FLh9bUrVUjr+bt6XPo07MLfXt1JW7DZt6d9QkTx4zktzXx7NidyIIPJ5
Odk8P9T46mY9sY/MqXc21mq5UJP6xlxoM9CPMvx93TFnJjw+rUDauUV/PBsi30aFKTgW0jSUzJYMTcJfw
cOYBci5UXv1rJ6wM70KByIBmnz+Hj7do/+h65jC1Wxk+by6wJLxAeHMjgx8fSpW0L6taslp/5g8+5rVsH+n
bvRNym7Uz+6EsmPPcorZtFseD9CQCczDxF7/tH0q5Fk8u9VTFmtjB+ymxmvfkS4SGBDH70ebrc0JK6tfJPE
//2jI+5rXtn+vbsTFzCVibPnseEF55g0/adJGzfydcf/BuAIU+OZf3m7bRq1tileV+f9D4fvPO6bb146Gm6tG9D
3doO68W0D+lzc9f89WLmx0wc+wy/rY5nx65EFsx5z7ZePPECHdu2dPl6gZfQdML9rB44gbNJx7lx0eskL95
I1i7nU+8f+X4tW0fPvejle6b/iHfZ0tQacpNrc14LD+oh+NucmEhE6orIIhHZICK/i0ik/fm5IjJFRFaLyF4RGWB
/3ktEpovIThH5VUR+EpEBIvIEUAVYLiLLHeY/XkQ2i8haEQm73p+vZbMmVPSvcL3f9rK2/rGbGlUrU71KOL
6+vvTq2pFlK+OcahL3H6J1i6YAtG7RlOX26Yn7D9EyOgofH2/KlS1D/Tq1WBm30eWZtx1Ko3qQP9UCK+Dr
403P6Nqs+OOQU42IcPq87cqPp85lE+Jv+0O5ZvdR6oUH0KByIACVypfB28u1Xy9PXMZb/0ykRpUwqlcOx
dfXh16d27J8zQanmr0HjtAmOsqWObrRRdMBFq9cR4dW0ZQt4/qrF27duYcaVcOpXiXMtpy7tGf56vgCm
Q/TprntR751s8YO04Xz2Tnk5OaSnZNLriWXoIBKuNLWP3YVWC86sWzlWqeai9eLtfbnDzqvF3VrsTLu4uVf
3AKaR3B6XwpnDqZiciwc+W4N4T1jrvr1aSu3k3v6rAsT/g+slqLf3ORv0yDAduWox40xMcAoYLrDtMpAB+
BWYKL9uTuAWkAj4F7gBgBjzBTgKNDFGNPFXlseWGuMiQZigYdc+kk8QGra8bwuSICwkGBSjx13qmkQUZ
slsWsAWBK7htNnzpJxMpMGdWuzMm4jZ8+dJz0jk/iErSSnHnN95swzhFcsn5/ZvxypJ0871TzSNZqFCXvp
MWE+I+Yu5fk+bQA4kJaJAMPn/Mrg9/7LR79tc31eT1zGx0/kdaUDhAUHkpKW7lRTv04Nlqyy/aAuXbWe
02fOkZHpfJnlRSvW0LvzDS7PC5CadoLwEMflHERK2gmnmvp1a7Hkd1tja+nKOPtyzqJZVANaN4vipn88xE0
DH6J9y2bUcegNcUneY8cJDw1xyBtMatql1ovVQIH1IuLCenGO9IyTxG/ccl3WizKVAzh7ND/j2aQTlLE3rh1
VuaUVnZdNpNXsJylT5eLpJZL7Lm5UZH+LXQYi4ge0A+Y77Ltz3LT4ztthGfuxw2LrvAMy3P5/s2BtwCdnAj/b
7G4DuxRb+L2zUo/cz/p2ZfL9oKTFNGxMWEoSXlxftWzdn287d3PPocwRU8ic6KtLlW9tXa9HmffSJiWBIxy
g2H0hlzFe/s+DJvlisVhIOpDLvsVso4+vDsNmLaVQ1iDYRld2a1xOX8aiH7+aNaXP5/tdYYppEEhocgJdDtmP
H09m9/xDtWjZ1Y0pno4YN4Y33ZvP94uXENGlEaHAgXt5eHDySxN6DR1jy5UwAHnr2NTZs2UFM00buzfv
YA4x/Zwbf/7yUmOgoh/WihW29GP4sAZUqEt04Em8v146DuVrJizdy5NvVWLNzqXnvTbSYMpzVA8a7O1
bhdAxBieMFZBhjml1m+nmH+9ey4zfHfiEJAAuXWK4i8jDwMMD0f7/O0CFXvC6FxwsNDiI5NS3vccqxNEId
tgwv1EwePxqAM2fOsiR2Nf4VbGMzhw0ZyLAhAwF4btzb1Kxe1fWZ/cuR7NAjkJJ5hlCHHgOAb9fvZvr9tv
ZedM1QzudYyDhzjrCK5WlRK4yA8mUA6NCgKn8cPe7SBoFHLuOgQJIdejFS0k4QFhxQoCaAd1962pb57Dl
+XbkOf7/8/4dfYuO4qV1LfH2uz5+v0OBAko85LufjhAUHXlTz7qvP2TOf5dff1+LvV56vFy6hacN6lCtbFoAO
rZuzecculzYIQkOCnLbqU46lERp8qfXiRVveM2dZ8pvjejGIYUMGAfDcq29Rs3oVl2W94FxSOmWr5GcsWz
kwb/DgBTnpp/LuH5i3nKixd7k8V7HQMQQlizEmE9gnIv8AsF8fOrqQl60C+tvHEoRhu8zkBVlAkXbYG2Nm
GWNaGmNa/tUbAwCNI+tx8PBRDh9NJicnh5+X/k6X9m2catIzMrHaW88fzFtAv97dANugqIyTmQD8mbiP
XYn7adequcszR1UL5mBaJkdOZJGTa+GXzfu4saFz927lSn7EJdouKb43NYPsXAsB5cvQrn4V9qSkczY7l1yLl
Q37UqgT6tp9xZ64jBs3qMOBI8kcTk4lJyeXn1espXNb533F6Sez8jLP/s8P9OvR2Wn6zytWX7fdBQCNIyM4
```

cCSJw0kptuW8fBWd27Vyqkk/mb+cZ3/+Lf1utg1uqxwazPotO8i1WMjJzWXDlu3UqeHaXQaNI+sXWC9i6
dKh4HpxMn+9+Gw+/XrbGrlO68WefexK3Ee7Vi1cmhcgY1Mi5euEU65GCOLrTdXbbyB5sfPYhdIO36fKPW
PI2n2k4GxKJqu16Dc3+av2EJSzXx/6gknA3cD7IjIG2zWj/wNsvsI8vga6AjuAQ8BG4KR92ixgkYgcdRhH4FbP
vjyR+IQtZGRk0vX2e3j0wXvpf1tPt+Xx8fFm9FPDGDbqFSxWK/16dyOidg2mfjiPqAYRdOnQhvhNW3l35ieI
CDHRUYx5+hEAcnMtDBnxAgB+5csyccxIfHxc323p4+3F833aMHzOEqzGSt+W9YgIC2D6rwk0qhpE50Y1G
Nm7JeO+Xc28lTtA4NUB7RER/MuW5t4Ojbh72o+ICB0aVKVTpGv/8HvmMvZm9GP38cjof9ky97iRiFrVm
PrxAqLq16bLDTHEb9nB5Dlf2jI3ieTFx+7Le/2R5GMkHztBy6YNXZ7VKfPjQ3nk/163Ze51ExG1qjP1o/8Q1a
AuXdq1In7TdiZ/OA9BiGnaiBefGApA905tiUvYxh1DRyII7Vs1o7OLD5P08fFm9NOPMOyZl2x5b+lORO2aTJ
39GVGR9WzrRcJW3p31sS1vdGPGjBwO2NeLx/4PAL/y5Zg4dtR1WS+MxcqW0XO54YvnEW8vDn6xgqw/j
xD53AAyNu0lefFG6gztSXjPGEyuheyMUyQ8OTPv9R2+ewm/elXwKVeGHhvfI2HkBxxbscXlua+GMZ5z6m
LJ7+lWBYmInzHmlIgEAeuA9saY5P91vjlpez1voVty3J2gSHJXfe3uCEXm076/uyMUmTmbVXhRSeLj+qMSi
puUKuPuCEXyU9OX3R3hmvRN/twlxwmf2/Rjkf/el2l2q2uPWb6Mv2oPQXH5UUQqAaWA14qjMaCUUup
vRAcV/jUYYzq7O4NSSil1PWiDQCmllHIVDzrKQBsESimllKu48cyDRaUNAqWUUspVtIdAKaWUUp40qPBvc
WIipZRSyi1cdC0DEblZRP4UkT0i8vwlptcUkaUiskVEVohIoSdG0QaBUkop5SouOFOhiHgD04Be2C7Ad6eIF
Dwf9tvAJ8aYpsA4YEJh89UGgVJKKeUqrjl1cWtgjzFmrzEmG9uZd/sWqGkELLPfX36J6RfRBoFSSinlIsZYiny7
ClWxnVL/gsP25xxtBu6w3+8HVLCfdfeytEGglFJKuco19BCIyMMist7h9vA1vPMo4EYRSQBuBI5guxrvZelRB
koppZSrXMNhh8aYWdguonc5R4DqDo+r2Z9znMdR7D0EIuIH9DfGZFzpfbVB4A4edqEgALx93Z2gaDzsgjC
A5y1jQMoW6Srg7ice2Cnq5fqrDRanYLLdHaFkcc1hh/FAPRGpja0hMBi4y7FARIKBE8YYK/ACMKewmXrgt
0MppZTyEC447NAYkwuMAH4B/gC+MsZsF5FxItLHXtYZ+FNEdgFhwPjC5qs9BEoppZSruOjERMaYn4CfCjz
3ksP9BcCCosxTGwRKKaWUq+ipi5VSSinlSacu1gaBUkop5Soe1CDQQYVKKaWU0h4CpZRSymV0DIFSSiml
PGmXgTYIlFJKKVfRHgKllFJKaQ+BUkoppbSHQCmllFJoD0FxExELsBXwBXKBT4B3jDFWEWkJDDHGPOHC9
78d2GWM2eGq9yjMyrgNTJwyG4vVQv9bejD0ngFO048mpzJ24hROZJykon8FJo4ZSXhoMACT3p9L7Nr1
AAwbMoheXTte9/wFjXljErGr1hEYUInvPpvh7jh5Vu08yJvfrcZqNfRrE8kDXZs7TU9Kz2LsFyvIOnseqzE8cU
sbOjaswcINu/l4xea8ut1Jx/ni6f5EVg2+3h/BSUlczp62Lq+M28DEybOwWK30v7UHQ+/5x8V5J7zLiYxMKvr
7MXHsKIe8HxG7Jt6W95+D6dW1k8vzXo2SuF5U6tKMOq/dD95epMxbypGp3zlNDx3UmVov3cv5pBMAJ
M9ZRMrnSwFod+RLTv9xEIDsI2n88c9/Xd/wV+JBDQJPOQ/BWWNMM2NMFNAd6AW8DGCMWe/KxoD
d7UCjorxARIqtsWWxWHj9nZm8/9bL/PDJNH5aGkvi/oNONW9Pn0Ofnl34du57DP/nIN6d9QkAv62JZ8fu
RBZ8OJnPZ7zN3C+/5dTpM8UV7Zrd3rs7Mya97u4YTixWKxO+WcW0h3rzzXMDWZSwh8TkdKeaD5ZspE
ezOnz5zAAm3tONN77+HYBbYurx1TMD+OqZAYy/qwtVA/3d3hiAkrecPW1dtlgsvD7pfd5/+1V++HQ6Py3
5jcR9BfJO+5A+N3fl24+nMvy+O3l35se2vKvj2bErkQVz3uPzmZOY+5+S8d2Dkrde4OVFnQlD2X7XeBI6PU
1Ivw6UrV/torK071ezuduzbO72bF5jAMB6Ljvv+RLVGAAwpug3N/GUBkEeY0wq8DAwQmw6i8iPACLSWk
TWiEiCiKwWkQb25+8Tke9E5FcR2S8iI0RkpL1urYgE2uvqisgiEdkgIr+LSKSItAP6AG+JyCZ7zUV19tfPFZEZIh
IHvFlcn3nrH7upUbUy1auE4+vrS6+uHVm2Ms6pJnH/IVq3aApA6xZNWW6fnrj/EC2jo/Dx8aZc2TLUr1OLl
XEbiyvaNWvZrAkV/UvWpXO3HUylepA/1YL88fXxpmfzCFZs3+9UIwinz9kuX33q3HlC/MtfNJ+fE/bQs1nd6
xG5UCVtOXvaurz1j10F8nZi2cq1heRda3/+oHPeurVYGbfBpXmvVklbLyo0j+DcvmTOH0zF5ORy7LtVBPZs
5e5YxcNqLfrNTTyuQQBgjNkLeAOhBSbtBDoaY5oDLwFvOExrDNwBtMJ2Gcgz9ro1wBB7zSzgcWNMDDA
KmG6MWQ38ADxr76VIvFSdw/tUA9oZY0YW1+dNTTue1wUJEBYSTOqx4041DSJqsyR2DQBLYtdw+sxZM
k5m0qBubVbGbeTsufOkZ2QSn7CV5NRjxRXtLyX15BnCK/nlPQ6rWJ7Uk6edah7pGcPCDbvpMe4zRsz+m
ef7tb9oPos37aVX8wiX5/VEnrYupx47TnhoiHPetEvlXX1x3ogLec+RnnGS+I1b9Lt3GaUqB5J9NC3vcXbScU
pXDryoLuiWtjRb9m8azH6GUlWC8p73Kl2K6F/+RdOFbxB4cwlrSHhQg8AjxhAUQUXgYxGpBxhsYw4uWG
6MyQKyROQk8F/781uBpiLiB7QD5ovIhdeULvgGV1E33xhjKabPc9VGPXo/49+ZyfeLlhLTtDFhIUF4eXnRvn
Vztu3czT2PPkdAJX+ioyLx9vLIdmCJsCghkT6t6jOkczSb9ycz5otlLBg1EC8v27qw9UAKZXx9iLjEHzN1dTxtXR
712AOMf2cG3/+8lJjoKIe8LWx5hz9LQKWKRDeOxNvL291xPdaJxes59u1KTHYuYfd2p96UEWwf8CoA61s
OJzv5BKVrhNL461c488dBzh1IcXNiOz3KwLVEpA5gAVKBhg6TXsP2w99PRGoBKxymnXe4b3V4bMW2HL
yADGNMs0LevrC605d6UkQexrarg+lvvcrQewcV8jb5QoODSE7Nbz2nHEsjNCTooprJ40cDcObMWZbErsa
/gm1rd9iQgQwbMhCA58a9Tc3qVa/6vf9OQiuWIznjVN7jlJOnCa3ovEvg27idTH+oNwDRtcI5n2Mh4/Q5A
iuUBWDRpkRubl4ydheURJ62LoeGBDlt1accSyM0+FJ5X8zP+5tj3kEMG2L7rj/36lvUrF7FpXk9VXbSCUpVy
e85KlU5KG/w4AW56Q7fzXlLqTX2nvzXJ9tqzx9M5eTq7ZRvUrvkNAh0UKHriEgIMAOYasxFoy8qAkfs9+8r
ynyNMZnAPhH5h/19RESi7ZOzgApXUXel+c8yxrQ0xrQsSmMAoHFkPQ4ePsrho8nk5OTw89Lf6dK+jVNNe
kYmVvuK98G8BfTr3Q2wDYrKOJkJwJ+J+9iVuJ92rZxHziubqOqhHEw7yZHjmeTkWvglYQ83RtV0qqkc4Efc
btsqtjclnexcCwF+ZQCwWg2LNyVys+4uuCxPW5cbR9YvkDeWLh0K5j2Zn/ez+fTr3f3ivHv2sStxH+1atXBpX
k+VtWkPZetUpnSNUMTXh5Db23NicbxTjW9opbz7gT1bctb+PfSuWB4pZdu29QmsgH+rSM7sOnz9whfG
gwYVekoPQVkR2UT+YYefApMuUfcmtl0GY4CF1/A+dwPv21/vC/wH2Gz/9wMReQIYcIU6l/Dx8Wb0U8M
YNuoVLFYr/Xp3I6J2DaZ+OI+oBhF06dCG+E1beXfmJ4gIMdFRjHn6EQBycy0MGfECAH7lyzJxzEh8fNzfbfns
yxOJT9hCRkYmXW+/h0cfvJf+t/V0ayYfby+ev6MDw2f9hNUY+rZuQER4INMXxdOoWgidG9di5G03MG7+
b8yL3QIivDq4Mxd2HW3Ym0R4JT+qBfm79XM4KmnL2dPWZR8fb0Y//QjDnnnJlveW7kTUrsnU2Z8RFVn
PljdhK+/O+hhBiIluzJiRw/PzPvZ/9rzlmDh2VIn47kHJWy+wWNk7ejZRX4wBby9Sv1jG2T8PU+O5QZzalMiJ

xeupMrQ3gT1bYXIt5GacYveTUwEoV68add96GKwGvITD733L2ZLUIPCgHgK5eCNbuVpOyp+et9C9fQuvK
UFy135XeFEJ49P2dndHKDpLjrsTFI14XKcoeNi4g3WNn3N3hGvSPnmBFF5VdGc/HFXkv/dlH3zbJVkK4yk9
BEoppZTn8aBBhR7YXFZKKaVUcdMeAqWUUspFjNVz9hBrg0AppZRyFQ8aVKi7DJRSSilXMdai366CiNwsIn
+KyB4Ref4S02uIyHL7Kfq3iEjvwuapDQKllFLKVaym6LdCiIg3MA3bhf4aAXeKSMEL8I0BvrKfon8wzqfYvyTd
ZaCUUkq5imt2GbQG9tiv64OI/AfoC+xwqDHAhZOiVASOFjZTbRAopZRSrnINDQLHU93bzTLGzHJ4XBU45
PD4MOB8Ck14BVgsIo8D5YFuhb2vNgiUUkopV7mGk//Zf/xnFVp4ZXcCc40x/xaRG4BPRaSxMZcfpKANAq
WUUspVXLPL4AhQ3eFxNfKv43PBg8DNAMaYNSJSBgjGdlHAS9JBhUoppZSruGBQIRAP1BOR2iJSCtugwR
8K1BwEugKISEOgDHCMK9AeAqWUUspVXHDqYmNMroiMAH4BvIE5xpjtIjIOWG+M+QF4BttF+Z7GNsD
wvktcIdiJNgjcIHfV1+6OUHSlyrg7QZF44oWCPPGCTKQUOnC5RJGoVu6OUGTmbJa7IxTJjSfWuDvCNcl11Y
xddKZCY8xPwE8FnnvJ4f4OoH1R5qkNAqWUUspFjAedqVAbBEoppZSr6LUMlFJKKeVJlz/WBoFSSinlKtpD
oJRSSim92qFSSimlPIr2ECillFKuorsMlFJKKaWDCpVSSimlPQRKKaWU0hMTKaWUUgq0h0AppZRSaIOgJBC
RU8YYP4fH9wEtjTEjrvCaPkAjY8zEK9R0BkYZY269xLSngFnGmDP/S/ZLWfXnEd78cR1Wq6Ffq3o80LmJ0/S
kjFOMnb+KrLPZWI3hiZ4t6BhZDYBdSSd4/du1nDqfjZcI8x67ldK+3sUd8eLMOw/y5nerbZnbRPJA1+bOmd
OzGPvFCrLOnrdlvqUNHRvWYOGG3Xy8YnNe3e6k43zxdH8iqwa7PPOVjHljErGr1hEYUInvPpvh1iwXeOIy
XrU3lTeXbsNqDP2a1uCBtvWcM2eeYezCTWSdz7Fl7tSQjnXD2JqUzmu/bLEVGXikfX1uql/Z9Xm37OZf836
yLeMbW/DgrZ2cph9Ny+DlD78lPfMMFf3K8saw/oQFVmTngSTGf/xfTp09j7eXF0P7dOLmNk0u8y4uzL99
H29+tdSWv31THri5jXP+4yd55ZNFpJ86g3+5srzxwC2EBVS47jl79ujMpEnj8PbyYs5HX/DmW9Ocpnfs0lZ//
/tVmjZpyF33PMo33ywEoEaNqiyY/yFeXl74+vowbdpHzPrg0+ue/7J0UKFnsl8ysuA1pYviKeAzoFgbBBarlQ
k/rGXGgz0I8y/H3dMWcmPD6tQNq5RX88GyLfRoUpOBbSNJTMlgxNwl/Bw5gFyLlRe/WsnrAzvQoHlgGaf
P4eMtxRnv8pm/WcWMYbcQVrE8d7/7DTdG1aJueEB+5iUb6dGsDgPbRZGYnM6I2T/x85i7uSWmHrfE2H
4kdicd5+mPFru9MQBwe+/u3NW/D6Nfe9vdUQDPXMYWq2HCkq3MGNiWsAplufuT37kxIpy6wfk/QB+s
3k2PyCoMbF6LxLQsRiyI4+e6YUQEV+DzIR3x8fLi2KlzDJz7G50iwvDxct3pVCxWK2988iMzn/snYYH+3PXKT
Do3j6Ru1dC8mkn/+YXb2jejT4fmxO3Yy+T5S3hjWH/KlPbl9Yf7UzM8iNT0TO58eQbtGkfgX76sy/JeKv+EL
35lxpMDCQuowN0TPuXGpnWpWyX//3rS1yu4tW0UfW5ozLqdB5jyXSzj77/lumUE8PLyYsrk8dzc+04OH0
5i7Zqf+O+Pi/njj915NQcPHeHBoU8z8ulHnF6blJRKh459yM7Opnz5cmxOWMZ/f1xMUlLKdf0Ml+VBPQR/
yxMTiUiIiHwtIvH2W3v78/eJyFT7/boislZEtorI6yJyymEWfiKyQER2isg8sXkCqAIsF5HlxZl326E0qgf5Uy2wA
r4+3vSMrs2KPw4V/EycPp8DwKlz2YT4lwNgze6j1AsPoEHlQAAqlS+Dtwv/gOZlPphqyxzkb8vcPIIV2/c7Z0Y
4fe5C5vOE+Je/aD4/J+yhZ7O6Ls97NVo2a0JF/+u/5XQ5nriMtyWlU71SeapVKo+vtxc9G1ZhxZ5k58wCp7
NtF6M9dT6HED/bpbfL+q/XO9AAACAASURBVPrk/fhn51pxfbMWtu09TPWwQKqFBuLr48PNbZqwYuNO
p5rEI6m0blgHgNYNa+dNrxUeTM3wIABCA/wJ9C9Pelaxdx5eOf/+JKqHBlAtpJJtHWkVyYote5xq9iYdp3W
DGgC0alCDFZv3XGpWLtW6VXMSE/ezb99BcnJy+Oqr7+lzW0+nmgMHDrN16x9YCwzSy8nJITs7G4DSpUv
jdR3+vhWFsZoi39ylZC254lVWRDZduAHjHKZNBt4xxrQC+gOzL/H6ycBkY0wT4HCBac2x9QY0AuoA7Y0xU
4CjQBdjTJfi/CCpmWcIr5j/hzzMvxypJ0871TzSNZqFCXvpMWE+I+Yu5fk+tm7BA2mZCDB8zq8Mfu+/fPTbt
uKMdvnMJ88QXilvjw1hFctfnLlnDAs37KbHuM8YMftnnu938aW7F2/aS6/mES7P64k8cRmnnjpHeIX8LeS
wCmVIzTrnVPNI+wYs3H6YHtN/ZcSCdTzfrXHetK1H07njw+UM+GgFY3o0dWnvAEBqehbhgRXzHocG+pO
SnulU06BGOEs37ABg6YY/OH3uPBmnnH/4tyYeJifXQvXQAK6n1PRThDt0/4dVqkBq+imnmvrVQlmaYNsS
X7ZpN6fPZZNx6ux1zVmlajiHDh/Ne3z4SBJVqoRf9eurVavCxg2/sn9vPG+9Pa3k9A6ArYegqDc3+Ss3CM4a
Y5pduAEvOUzrBky1NxR+APxFxK/A628A5tvvf15g2jpjzGFjjBXYBNQq/vhFs2jzPvrERLD4hX8w9b6ujPnqd
6xWg8VqJeFAKm8M6shHw3qxfPtB4vYkuTsuAIsSEunTqj6LX7qHqUN7MeaLZVgdvgxbD6RQxteHCHvvhi
o6T1zGi/44Qp/G1Vn8aHemDmjNmIUJWI0tc5MqAXzzYBfmDenIh2v3cD7X4ua0MHJwT9bv3M/AsdPZs
HM/oQH+eEl+/8WxjCxenPU144b2K3FbrwAj+3dmw+5DDBr/Met3HSK0kh9eXtej/6X4HD58lBYx3WnQs
D1D7v0HoaHu38WYx2ot+s1NSt7aeX14AW0dGgxVjTGnCn1VvvMO9y1cxVgMEXlYRNaLyPoPF68rUthQ/
3IkO2z5pWSeIbSic9fvt+t306NJLQCia4ZyPsdCxplzhFUsT4taYQSUL0PZUj50aFCVP44eL9L7X4vQiuVIzshfp
CknT1+cOW4nPaJtXdXRtcJtmU/nby0u2pTIzc1Lxu6CksgTl3GoXxmSs/K3PlOyzhFaoYxTzbdbDtIjsgoA0VU
DOZ9rJeNMtlNNnaAKlCvlzZ5jWa7NG1CB5BMn8x6nnsgkLMC/Ql0/7zxxJ1+99iiPD+gKkDdO4NTZc4yY9B
mPD+hG04jqLs16KaEBfiSn5y+jllwsQgOct31CK/kx6ZHb+fLFf/J4344A+Jdz/j9xtaNHkqlerUre42pVK3P0aP
lVXnFpSUkpbNv+Jx06tCm8+HrRHoISbzHw+IUHItLsEjVrse1OABh8lfPNAi65k9kYM8sY09IY0/LBHq2Lkp
WoasEcTMvkyIkscnIt/LJ5Hzc2rOZUU7mSH3GJti3/vakZZOdaCChfhnb1q7AnJZ2z2bnkWqxs2JdCndBKl3q
bYhVVPZSDaSc5cjzTljlhDzdG1XTOHOBH3O4jtswp6bbM9v3FVqth8aZEbtbdBZflics4qnIlDqaf5kjGGXIsVn
754yg3Rjh3DVf2L0vcgTRb5uNZtszlSnEk4wy59q2noyfPsP/4KapUdO0AvajaVTmYcoLDx9LJyc1lUdxWbm
we6VSTnnU6b7/2hz/+zu2dbEd65OTm8vSUL7itfTTdW0W5NOflRNWszMHUdI6kZdjWkfid3NjU+f87/dS
ZvF6jDxfFcXu7638kRPz6TURE1KZWrer4+voycGBf/vvj4qt6bdWqlSlTxrZOV6pUkfbtW7NrV6Ir4xaNBzUI/
q5HGTwBTBORLdiWQSzwSlGap4DPRORFYBFwksLNAhaJyNHiHEfg4+3F833aMHzOEqzGSt+W9YgIC2D6
rwk0qhpE50Y1GNm7JeO+Xc28lTtA4NUB7RER/MuW5t4Ojbh72o+ICB0aVKVTZLXC37Q4Mt/RgeGzfsJqD
H1bNyAiPJDpi+JpVC2Ezo1rMfK2Gxg3/zfmxW4BEV4d3Bmxd7Vu2JtEeCU/qgX5F/JO18+zL08kPmELGRm
ZdL39Hh598F76Fxj4dD154jL28fLi+W6NGT5/rS1zk+pEBFdg+u87aRReic71whnZJYpxv2xm3vq9tnW5dzN
EhIQjx5nz9R58vL3wAl7o0YSAcqVdm9fbmxfuvYXhb32C1Wrl9k4tiKgWyrRvlhJVqyqdW0Syfud+psz/FRBi

GtRk9BDbEcm/xG1n458HOHnqLD+s3ATAuKH9iKzp+kMl8/N78fygbgyfsgCr1Urfdk2IqBLM9B9W0qhmO
J2jI1j/5yGmfBeLiBBTrxovDO523fJdYLFYePKpMfy08HO8vbyY+/GX7Nixi1deHsX6DZv58cdfaRkTzYL5HxI
QUJFbb+nOyy89Q3Szm2gYGcGbb76EMbYBqZMmzWDbtp2Fv+l1YoznHGUgnhT2ehKRctjGIRgRGQzcaY
zpWxzzPvvNG5630Etd3y7E/5VP29vdHaHIctd+5+4IRZdytPCaEkSiWrk7QpGZs67dLVLcKvR82d0Rrklu9h
GXDJzIfKhHkf/e+3+w2C2DOP6uPQRXIwbbwEMBMoAH3JxHKaWUp/Gg8xBog+AyjDG/A9HuzqGUUspz
ueq8AiJyM7bD472B2QXPsCsi7wAXdl2XA0KNMVccQKYNAqWUUsqDiIg3MA3oju08OfEi8oMxZseFGmP
M0w71j2M7f84V/V2PMlBKKaVczzVHGbQG9hhj9hpjsoH/AFca43Yn8EVhM9UGgVJKKeUq1qLfHM9bY7
89XGCuVQHH89cftj93ERGpCdQGlhUWVXcZKKWUUi5yLWMIjDGzsB3GXhwGAwuMMYWe1lMbBEopp
ZSruGZQ4RHA8dSX1ezPXcpg4LGrmanuMlBKKaVc5Rp2GVyFeKCeiNQWkVLYfvR/KFgkIpFAALDmamaqP
QRKKaWUi7jisENjTK6IjAB+wXbY4RxjzHYRGQesN8ZcaBwMBv5jrvIMhNogUEoppVzFRRcvNMb8BPxU4L
mXCjx+pSjz1AaBUkop5SKuOjGRK2iDQCmllHIVF/UQuII2CNzAp33/wotKGm9fdycoEk+8UJAnXpAJS467E
xSNeOA4ai9vdycokmWBv7g7QolitEGglFJKKe0hUEoppZT2ECillFIK7SFQSimllPYQKKWUUgptECillFIKz2o
QeOAxOEoppZQqbtpDoJRSSrmKEXcnuGraIFBKKaVcxJN2GWiDQCmllHIRY9UeAqWUUupvT3sIlFJKKYX5
O44hEJF3gAPGmHftj38BDhljhtof/xs4AmwERhljbi3CvFfYX7O+uPJe5n36AI2MMROvUNOZy+QXkaeAWc
aYM8WdbWXcBiZOmY3FaqH/LT0Yes8Ap+lHk1MZO3EKJzJOUtG/AhPHjCQ8NBiASe/PJXatbdENGzKIXl0
7Fne8IhvzxiRiV60jMKAS3302w91x8qzaeZA3v1uN1Wro1yaSB7o2d5qelJ7F2C9WkHX2PFZjeOKWNnRs
WIOFG3bz8YrNeXW7k47zxdP9iawafL0/gpOSuJw9bV1eGbeBiZNnYbFa6X9rD4be84+L8054lxMZmVT09
2Pi2FEOeT8idk28Le8/B9OrayeX570aJXG9COjSjLqv3Y94e5E8bymHpjpfoCxsUGdqv3Qv2UknADg652eSP
1+WN93brywtY98hbVE8iaM/vK7Zr8STegiK87DDVUA7ABHxAoKBKIfp7YDVxfh+xc4Y88OVGgNX4SmgX
HHlucBisfD6OzN5/62X+eGTafy0NJbE/Qedat6ePoc+Pbvw7dz3GP7PQbw76xMAflsTz47diSz4cDKfz3ibuV
9+y6nTxd5eKbLbe3dnxqTX3R3DicVqZcI3q5j2UG++eW4gixL2kJic7lTzwZKN9GhWhy+fGcDEe7rxxte/A3B
LTD2+emYAXz0zgPF3daFqoL/bGwNQ8pazp63LFouF1ye9z/tvv8oPn07npyW/kbivQN5pH9Ln5q58+/FUh
t93J+/O/NiWd3U8O3YlsmDOe3w+cxJz/1MyvntQ8tYLvLyImPAg2+4az/pOTxPSrz3l6le7qOzY96vZ2O1ZN
nZ71qkxAFDr/wZzcu0f1yvxVTNWKfLNXYqzQbAauMF+PwrYBmSJSICllAYaYusdAPATkQUislNE5omIAIhI
VxFJEJGtIjLH/jonItJDRNaIyEYRmS8ifgWmh4rIBvv9aBExIlLD/jhRRMqJSIiIfC0i8fZbe/v0+0Rkqv1+XRFZa8/
yuoiccnibi/KLyBNAFWC5iCwvnkVqs/WP3dSoWpnqVcLx9fWlV9eOLFsZ51STuP8QrVs0BaB1i6Yst09P3H
+lltFR+Ph4U65sGerXqcXKuI0Xvcf11rJZEyr6V3B3DCfbDqZSPcifakH++Pp407N5BCu273eqEYTT52yX/D11
7jwh/uUvms/PCXvo2azu9YhcqJK2nD1tXd76x64CeTuxbOXaQvKutT9/0Dlv3VqsjNvg0rxXq6StFxWaR3B2
XzLnDqZicnI59t0qgnq2vOrX+zWtg29IRdJ/21x48XVmTNFv7lJsDQJjzFEg1/7j2w5YA8RhayS0BLYaY7Lt5c2
xbU03AuoA7UWkDDAXGGSMaYJtd8Zwx/cQkWBgDNDNGNMCWA+MLJAjFSgjIv5AR3tNRxGpCaTau/M
nA+8YY1oB/YHZl/hIk4HJ9iyHC0y7KL8xZgpwFOhijOlydUvt6qSmHc/rggQICwkm9dhxp5oGEbVZErsGgC
Wxazh95iwZJzNpULc2K+M2cvbcedIzMolP2Epy6rHijPeXkXryDOGV8tuXYRXLk3rytFPNIz1jWLhhNz3Gfca
I2T/zfL/2F81n8aa99Goe4fK8nsjT1uXUY8cJDw1xzpt2qbyrL84bcSHvOdIzThK/cYt+9y6jdOVAzh/NX67nk0
5QqnLQRXXBt7ShxbK3aTj7GUpXsU8Xoc4rQ9j76ifXK26ReFIPQXEPKlyNrTHQDpgEVLXfP4ltl8IF64wxhwF
EZBNQC8gC9hljdtlrPgYeA951eF1bbD/Cq+ydCqWwNTwulaM90Al4A7gZEOB3+/RuQCP7PAD8C/Y0YGvI
3G6//znwdiH5V14ix3Uz6tH7Gf/OTL5ftJSYpo0JCwnCy8uL9q2bs23nbu559DkCKvkTHRWJt5eeoPJaLUpI
pE+r+gzpHM3m/cmM+WIZC0YNxMvLti5tPZBCGV8flioHujmp5/K0dXnUYw8w/p0ZfP/zUmKioxzytrDlHf
4sAZUqEt04Em8vb3fH9VjHF68n9duVmOxcKt/bjQZTRrBlwKtUub8nJ5ZuzBtbUNL8nQ87vDCOoAm2XQa
HgGeATOAjh7rzDvctRcghwK/GmDsLqYvF1jtQE/ge+D/AAAvt072AtsaYc04zl6v+jytyfhF5GHgYYPpbrzL03
kFX+16EBgeRnJqW9zjlWBqhIUEX1UwePxqAM2fOsiR2Nf4VbG2cYUMGMmzIQACeG/c2NatXver3/jsJrVi
O5Iz8PUMpJ08TWtF5l8C3cTuZ/lBvAKJrhXM+x0LG6XMEVigLwKJNidzcvGTsLiiJPG1dDg0JctqqTzmWRmj
wpfK+mJ/3N8e8gxg2xPZdf+7Vt6hZvYpL83qq80kn8rf4sfUYZCc598Tkpud/N5PmLaP22HsB8I+pj3+bhlS5
ryfe5cogpXywnD7H/vHzrk/4QrhzF0BRFXfzejVwK3DCGGMxxpwAKmHb2i5sQOGfQC0RudDXei/wW4Ga
tdh2L0QAiEh5Eal/iXn9DtwD7DbGWIETQG/yt+IXA49fKBaRZpeYx1psuxMABheS/YIs4JI75owxs4wxLY0xL
YvSGABoHFmPg4ePcvhoMjk5Ofy89He6tG/jVJOekYnVahvO+sG8BfTr3Q2wDYrKOJkJwJ+J+9iVuJ92rZxHz
iubqOqhHEw7yZHjmeTkWvglYQ83RtV0qqkc4Efc7iMA7E1JJzvXQoBfGQCsVsPiTYncrLsLLsvT1uXGkfUL5I
2lS4eCeU/m5/1sPv16d78475597ErcR7tWLVya11NlbdpD2TqVKVMjFPH1IeT29hxf7HxQWanQSnn3g3q
25Mxu257cnY9NYV3L4axr9Rh7x31KyvzYEtMYgL/3LoOt2I4u+LzAc37GmLRLv8TGGHNORO4H5ouIDxAP
zChQc0xE7gO+cBhwOAbYVaBuv32gYqz9qZVANWPMhSHjTwDTRGQLtmUQCzxSINJTwGci8iKwCNtuj8L
MAhaJyNHiHEfg4+PN6KeGMWzUK1isVvr17kZE7RpM/XAeUQ0i6NKhDfGbtvLuzE8QEWKioxjztO3j5OZa
GDLiBQD8ypdl4piR+Pi4v9vy2ZcnEp+whYyMTLrefg+PPngv/W/r6dZMPt5ePH9HB4bP+gmrMfRt3YCI8EC
mL4qnUbUQOjeuxcjbbmDc/N+YF7sFRHh1cOe8nqUNe5MIr+RHtSB/t34ORyVtOXvauuzj483opx9h2DM
v2fLe0p2I2jWZOvszoiLr2fImbOXdWR8jCDHRjRkzcnh+3sf+z563HBPHjioR3z0oeesFFit7Rn9I4y9etB12+M
Vyzvx5mJrPDSJrUyInFq+nytDeBPVsicm1kJtxij+fnOa+vEXgqvMQiMjN2Ma6eQOzL3WEnIgMBF7B1kO+2
Rhz1xXnaTypP+M6EpFywFljjBGRwcCdxpi+xTHvnJQ/PW+he/u6O0GR5K79rvCiEsan7e2FF5U0lhx3Jygacf
+YgyLzsHEHaxr/n7sjXJNOyfNd8su9p1HPIv+9j9jxyxWziIg3tg3h7tgGvcdj+43a4VBTD/gKuMkYky4iofZB95
elZyq8vBhgqr2nIQN4wM15lFJKeRira3oIWgN7jDF7AUTkP0BfYIdDzUPAtAs944U1BkAbBJdljPkdiHZ3Dq

WUUp7rWnYZOA5Ct5tljJnl8LgqtkH7FxwGnAe3QH37vFZh263wijFm0ZXeVxsESimlVAli//GfVWjhlfkA9Y
DOQDUgVkSaGGMyrvQCpZRSSrmAi44aOAJUd3hczf6co8NAnDEmB9gnIruwNRDiLzdTDxxho5RSSnkGF5
26OB6oJyK1RaQUtkPjfyhQ8x223oELZ/mtD+y90ky1h0AppZRyEVf0EBhjckVkBPALtvEBc4wx20VkHLDeG
PODfVoPEdmB7QR6zxpjjl9+rtogUEoppVzGRUcZYIz5CfipwHMvOdw32K71M5KrpA0CpZRSykVcdWIiV9
AGgVJKKeUinnTuP20QKKWUUi7iql0GrqANAqWUUspFdJeBUkoppXSXgboyczbL3RGKTMpe8qrOJVfKUX
cnKDpPu1AQeNxFr8y50+6O8JdXL+KKF7b929FdBkoppZTSXQZKKaWU0h4CpZRSSgEeNIRAGwRKKaWUq
2gPgVJKKaV0DIFSSimlwOruAEWglz9WSimllPYQKKWUUq5i0F0GSiml1N+e1YMOM9AGgVJKKeUiVu0hU
EoppZTuMlBKKaWURx1lUGiDQEReBO4CLNg+2zBjTJyI7AdaGmP+pytZiMhc4EdjzIJreO0rwCljzNv/SwaH
+bUEhhhjnrhCTS1seRtfYtp9wGJjTLFfWWdl/Gb+NeNTLBYrd/TqzNBBfZymH005xkuTPuDEyUwqVvBjwn
PDCQ8JYt2m7bw587O8un2Hknhz9Ai6tmtZ3BEvzhy3gYlTZmOxWuh/Sw+G3jPAOXNyKmMnTuFExkkq+l
dg4piRhIcGAzDp/bnErl0PwLAhg+jVtaPL8wKs2pvKm0u3YTWGfk1r8EDbek7TkzLPMHbhJrLO52A1hic6N
aRj3TC2JqXz2i9bbEUGHmlfn5vqV3Z5Xk9cxlcy5o1JxK5aR2BAJb77bIa74+RZuS6Bf037CIvVyh29uzL0zn5
O04+mHOOlt6ZxIiOTiv5+THjhScJDggCYNPNTYuM2YDWGG2Ka8vxjDyDi2q1GT8sLULpNK/yfHAFe3pz5c
SGnP/viopoyN3XG7/5/ApC7J5GMV18HIPy3JeTu3QeAJSWF9OfHuDzv1frL9BCIyA3ArUALY8x5EQkGSl2X
ZG5gjFkPrP8fZnEfsA0o1gaBxWJl/LS5zJrwAuHBgQx+fCxd2ragbs1qeTVvf/A5t3XrQN/unYjbtJ3JH33JhOc
epXWzKBa8PwGAk5mn6H3/SNq1aFKc8S6T2cLr78zkg0njCA8JYtDDz9ClQ2vq1qqRn3n6HPr07ELfXl2J27
CZd2d9wsQxI/ltTTw7diey4MPJZOfkcP+To+nYNga/8uVcm9lqmLBkKzMGtiWsQlnu/uR3bowIp25w/pUe
P1i9mx6RVRjYvBaJaVmMWBDHz3XDiAiuwOdDOuLj5cWxU+cYOPc3OkWE4ePluiN7PXEZF+b23t25q38f
Rr9WLG38YmGxWBg/ZTaz3nyJ8JBABj/6PF1uaEndWtXzat6e8TG3de9M356diUvYyuTZ85jwwhNs2r6Th
O07+fqDfwMw5MmxrN+8nVbNLtqe+NvmBcDLC/+RT3Li6WexpB4jePYMzq9cTe7+A3kl3tWq4nfPXRx/9
HFM1im8KlXKm2bOZ5N2/0OuzXiNPKmHoLC/VpWBNGPMeQBjTFqBrd/HRWSjiGwVkUiwbbWLyKgLBS
Kyzb5VjYgMEZEtIrJZRD4t+GYi8pqIzBURbxF5VkTi7fWvOtS8KCK7RGQl0OAS8/AWkX1iU0lELCLSyT4tVkT
qiUh5EZkjIutEJEFE+tqndxaRH+33Q0TkVxHZLiKzReSAvUEE4C0iH9inLRaRsiIyAGgJzBORTSJStpBle9W2/pl
IjSphVK8ciq+vD706t2X5mg1ONXsPHKFNdBQAraMbXTQdYPHKdXRoFU3ZMqWLK9rlM/+xmxpVK1O9Sji
+vr706tqRZSvjnGoS9x+idYumtswtmrLcPj1x/yFaRkfh4+NNubJlqF+nFivjNro887akdKpXKk+1SuXx9faiZ8
MqrNiT7FQjAqezcwE4dT6HEL8yAJT19cn78c/OvT7DiDxxGRemZbMmVPQvWZfa3rpzDzWqhlO9SphtOX
dpz/LV8U41ew8cpk1z249m62aNHaYL57NzyMnNJTsnl1xLLkEBlXAlT8sL4NswEsvho1iOJkFuLmeXLKN0h
/ZONeVuu5XT33yHyToFgDUjw+W5ioP1Gm7uUliDYDFQ3f4DPF1EbiwwPc0Y0wJ4Hxh18cvziUgUMAa4y
RgTDTxZYPpbQAhwP9AVqAe0BpoBMSLSSURigMH253oDrQq+jzHGAvwJNAI6ABuBjiJSGqhujNkNvAgsM
8a0BroAb4lI+QKzetleEwUsAGo4TKsHTLNPywD623d5rAfuNsY0M8acvdLyKIrU4yfyuvMAwoIDSUlLd6qp
X6cGS1bZvtRLV63n9JlzZGRmOdUsWrGG3p1vKK5YV5SadjyvaxogLCSY1GPHnWoaRNRmSewaAJbEruH0
mbNknMykQd3arIzbyNlz50nPyCQ+YSvJqcdcn/nUOcIr5LfjwiqUITXrnFPNI+0bsHD7YXpM/5URC9bxfLf8L
aetR9O548PlDPhoBWN6NHVp7wB45jL2RKlpJwgPcVzOQaSknXCqqV+3Fkt+tzW2lq6Msy/nLJpFNaB1sy
hu+sdD3DTwIdq3bEYdh549zWvjHRKMJTU177H12DG8HT4DgE/1avhUr07Q9PcImjmN0m3y//xLqVIEzZ
5he76jc0PC3QxS5Ju7XHGXgTHmlP1HuCO2H84vReR5Y8xce8k39n83AHcU8l43AfMvjDkwxjiuoWOBOG
PMwwAi0gPoASTYp/th+xGuAHxrjDljr/vhMu/1O9AJqA1MAB4CfgMuNIN7AH0cejLK4PyDD7bGRD971k
Ui4vgLvM8Ys8nhs9cq5LO73KiH7+aNaXP5/tdYYppEEhocgJfDD9Kx4+ns3n+Idi2bujGls1GP3s/4d2by/aKlx
DRtTFhIEF5eXrRv3ZxtO3dzz6PPEVDJn+ioSLxd/ON6tRb9cYQ+jaszpHVdNh85wZiFCSx4oDNeIjSpEsA3D3
Zh7/Esxi7cRPs6oZT28XZrXk9cxp5o1LAhvPHebL5fvJyYJo0IDQ7Ey9uLg0eS2HvwCEu+nAnAQ8++xoYtO4
hp2kjzFpW3Nz7Vq3L88afwDg0haOpkjv3zAcyp06QOGIw1LQ3vKpUJnDyJE4n7sBwt9qFc18Tqot93EbkZ
mAx4A7ONMRMLTL8PeAs4Yn9qqjFm9pXmWeigQvsW9wpghYhsBf4JzLVPPm//1+Iwr1ycex7KFPYe2H6
oY0Qk0N5QEGCCMWamY5GIPHUV8wKIBYYDVYCXgGeBztgaCtjn398Y82eB+Ydd5fzPO9y3AIXuHhCRh4
GHAaaNf4GhdxXWfsoXGhRIssOWX0raCcKCAwrUBPDuS08DcObsOX5duQ5/v/xOj19i47ipXUt8fa7PgSW
hwUEkp+aPN005lkaoQy/HhZrJ40fbMp85y5LY1fhX8ANg2JCBDBsyEIDnxr1NzepVXZ/ZrwzJWfkdOylZ5wi
t4Lz6frvlINP/0fb/2bvv8Ciqto/3jzsJvYdeQkdQekdApWNvWB/FimJvj+ijKHaxvYgKiohdxK7YQXoTDL2DNIE
QIBBCDSTZ3O8fMwm7ISEJspndcH+4ciU7c3b2l2Gzc+acM2cAaFkzmiNp6SQdSiG61NFumPoVy1CyaCTrE
vbTtHrwmlvDcR+HoyqVotme4L+fd1O1UvQxZYY/8wgAh5KT+WPmXMqWLsW36Be78QAAIABJREFUv0y
ixemNKFnC+Yjo2qE1S1auDeoBNtzyAvgSdhFZpUrm44jKlfEl7MpSJoHUlavA58MXv520LVuJqlWL1NVrSN
/llPVtiydl0WKKnNYwdCoEQTjjF5FIYCTQG9gKxIrIj6q6MkvRL1X1nrxu97inBCLSWET8h1m3Av7JqbxrE9D
GfX4bnLN0gCnAlSJS0V3n/w79HXgJ+EVEygATgFtEpLRbtqaIVME50F/q9tmXAS7KIcNfQGcgXVUPA4uBge
7zcbd/r7hDZ0WkdTbbmA1c5a7vA1TIpkxW+3FaMY6hqqNVtZ2qtstPZQCgWeP6/BO3na3bd5KamsZv0+
bSrVPbgDJ79u4nPd3pfRrzxY9c1qdbwPrfps0psO4CgGZNGrF56za2bttOamoqv02eSfcuHQPK7Enal5n5vb
HfcNn5vQBnUFTS3n0ArFm/kbXrN9G5fXb/RSdX0+rl2bznIHFJh0j1pTNh1TbOaVgtoEz1siWY94/z4bNh93
5S0nxUKFmUuKRDpLm/y7a9h9i0+wA1yp20YSTZCsd9HI6aNWnIP3HxbI3f4eznqbPp1jmwt3LP3qP7eczn
33PZuT0AqF6lEvOXriTN5yM1LY0FS1dQv3Zwm+DDLS9A6urVRMbUJLJ6NYiKokSvHhyZPSegzJGZsyjauh
UAUq4sUTG1SNsWj5QpDUWKZC4v2rxZwGBEr+kJfOVBB2Cdqm5Q1RTgC+CSf5s1t9PF0sBbIlIe58x/He5
Z7nF8C9wgIiuAecBaAFVdISIvANNNNFxIfTHXBTxpNU9Wv3IP8jzviAz4E/3WP2AeB6VV0oIl8CS4CdHO0CCO

BeEbEFmOsumglcCyxzHz8HDAeWikgEsBHnagp/zwDjRKQ/8CewHeeAX/o4v/tHwCgRSQbOPFnjCKIiI3n8
7pu44/GX8aWnc1mfc2hYtxYjPv6GpqfVo/uZbYldupI3PvgSEaFt8yYMvvumzOfHbU9ge0Ii7VqcfjLi5C1zV
CSPPzCQgQ8/7WQ+vxcN69VmxPtjadq4Id27diR28TKGv/uJk7llU5548A4A0tJ83HDPYwCULlWCl554iKgC
aHqPiojgf72acefXc0lX5ZLmMTSsVIa3Z67mjGrl6daoGg91b8qzE5Ywdv4GEHjm/FaICIvidvPBt+uIiowgAni
sT3MqlAzu4M1w3Me5GfTUS8QuWkpS0j56Xno9d93an34X9fU0U1RkJI/fO4A7Hn3e2c/n9aBh3RhGfPg
FTRs3oHvn9sQuXsEb749FENq2OIPB9w0AoPfZnZi3aDmXD3gIQejSvhXdgnzJb7jlBcCXzr5hbxI97BWIiCD5
l99I27iJ0rfeTOrqNRyZPYcj82Ip2r49lT79ENLT2ff2KHTfPoo0a0q5QQ+BKohw4LNxIVUhCNIgwZrAFr/HW4
GO2ZTr5w6qXws8qKpbsimTSVTDaKLlAuQOQvSpapp7+eU7qtrqZGw7ZdP8sNvpUiK0Rn7nJu3n97yOkG
9RF4bmZVPHFVnE6wT5oocPeh2h0Nt9TY7TuIS06rOmBqW3/5vq1+X78/7K7Z8PJPDke7Sqjs544F7Vdq6
qDnAf9wc6+ncPuK3xB9wT5IHA1ara43ivazMV5qw28JXbgpCCMzDRGGOMybMTOftzD/6jj1MkDojxe1y
Lo4MHM7bhf8nRGOCV3F7XKgQ5cC9PtE5VY4wxJyxIXQaxQCMRqYdTEbgGZ0bhTCJSXVXj3YcXA6ty26h
VCIwxxpgw4nZl34MzQD4S+MAdp/csMF9VfwTuE5GLccb/JeI3Zi8nViEwxhhjgiRY8xCo6q/Ar1mWDfH7+
THgsfxs0yoExhhjTJAUzETmJ4dVCIwxxpggCadLyqxCYIwxxgRJsLoMgsEqBMYYY0yQhNPtj61CYIwxxgSJdR
kYY4wxxroMjDHGGGNdBsYYY4zBKgQmN1HBvQteUMhx75QdcqRp+9wLhZow28cQfjcLkuKlvI6Qf+k+rx
Pky5QNNb2OcEKuC9J21boMjDHGGGMtBMYYY4yxCoExxhhj7LJDY4wxxmCXHRpjjDEG6zIwxhhjDFYhM
MYYYwzhNYYg/C58NsYYY8xJZy0ExhhjTJDYoEJjjDHG2BgCY4wxxoTXGAKrEBhjjDFBkh5GVYITqhCIyFTgJV
Wd4LfsAaAx8Btwhqq+dHIiFiwRmaOqnXMpswlop6q7sizvBqSo6pyTnWvWX4t4eeSH+NLTufz8ngy49rK
A9dt2JDDk1ZEkJu2jXNnSDH3sfqpVrgjAsHc/Zca8BaSrcmbbFvzv7lsQCX7H1qx5C3jpjdH40tPpd2EfBlx/Z
WDm7Tt5cujwzMwvPfkw1apUcjK/8yEz/owFYOCN13Bez7ODnhdg9tK/eXnsr6SnK5ed04ZbLwx83W27k
njq/e/Zs+8Q5UqX4MWB/agaXY7V/8Tzwsc/cSD5CJEREQy4+GzO7dg86HnDcR+H43v5eJ54cRgzZv9FdIXy
/PDZKE+z5NUTQ4czY04s0RXK8cMnb3sdB4Dq3VrQ7rn+SEQE68ZNY+WIn7ItF3N+e84ecz+/nfskiUs3llGR
dHptANHN6yJREWz8ehYrcniuF8Kpy+BErzIYB1yTZdk1wDhV/TFYlQERCXqLRm6VgVx0A/7N87Pl8/l44c0
xvD10MOM/eJ3fpsxi/aYtAWVeG/UxF/Xuxndjhn FH/yt5Y8xYABavWM2iFav59r3/4/sxw1i+ej3zl6w42RG
zzfz8sHd457Vn+PHTt/l10nTWb9wcmHnk+1x8bk++/3gEd950LcPf/RiA6XNiWbl2Pd988BafvzuMj774ng
MHDwU/c3o6L37yM2//tz/fD72H3+cuY33czoAyw76YwEVdWvHNC3dz+yXdeOPrSQAUL1aE52/vx/dD7+
Xth/vz6tjf2HcwObh5w3Efh+F7OTeXnt+bUcOe9zpGvlx6Xi9GvfaM1zEySYTQ/sUbmXrdK/zc7RHqXtKJso
1qHFMuqlRxmgzoy64F6zKX1bmoAxHFovil52P8du6TNOzfg1K1KhVk/OPSE/jKCxE5V0TWiMg6Efnfccr1E
xEVkXa5bfNEKwTfABeISFH3BesCNYCZInKTilxwl18pIstFZImIzHCXRYrIa+7ypSJyr7u8rYhMF5EFIjJBRKq7y
6eJyHARmQ/cLyIXicg8EVkkIpNEpGo2O+AXEWnh/rxIRIa4Pz8rIre5Pw8SkVg3wzN+zz3gfo8QkbdFZLWI/
CEiv4rIFX4vc6+ILBSRZSLSxN0HdwAPishiETnrBPftMZatXkftmtWIqVGVIkWKcF73LkydExtQZsM/W+nYuh
kAHVo181svHElJJTUtjZTUNNJ8aVSsUP5kRcs586q11K5ZnZga1ZzMPc9myqy5AWXWb9pChzYtnMxtWjD
VXb9+02batWxKVFQkJUsU57QGdZk1b0HQMy/fsJWYqtHUqhJNkagozu3YnGkLVwdmjttJh9PrO5lPr5e5
vm61StSp5pzFVqlQluiypdizP7gH2HDcx+H4Xs5Nu1bNKVe2jNcx8qVdq2Yhlbli6wbs37SDA5sTSE/18c/4u
cT0bXtMuZaPXMGKkT/jO5KauUwVokoWQyIjiCxelPSUNFIPBLcynh/pJ/CVGxGJBEYC5wFnANeKyBnZlCs
D3A/My0vWE6oQqGoi8JcbBpzWga9UNWvlZgjQV1VbAhe7y24H6gKtVLUFMFZEigBvAVeoalvgA+AFv+0
UVdV2qvp/wCygk6q2Br4AHskm4kzgLBEpB6QBXdzlZwEzRKQP0AjoALQC2opI1vbSy92cZwD9gTOzrN+lq
m2Ad4CHVXUTMAp4XVVbqerMbHKdkJ27EqlW+WiNt2rliuzYlRhQ5rQGdZk00/k/nzxrHgcPJZO0dz+tmja
mQ6um9LjyNnpcdRtd2rWifp1aJytazpkTdlOtSmW/zJXYuWt3QJnGDesxaYbTuzJpxp9u5n00bliPWfMWk
nz4MHuS9hK7cCnbdyYEP/Oe/VSLLpf5uEp0WXbs2ReYuXY1Ji9YCcDkBas4ePgISQcCD/zL1m8lNc1HTJUK
wc0bjvs4DN/LJvhKVKvAoW1H3weH4hMpUT3w76dC87qUrBHNtsmLA5Zv/vkv0g4d4fLFI7gsdjirRv1KStL
BAsmdF+mS/6886ACsU9UNqpqCcyy8JJtyzwEvA4fzstF/0wSf0W0w3v1+azZlZgMfichXwHfusl7AKFVNA6
dyISLNgGbAH25/YCQQ77edL/1+rgV86bYgFAU2ZvO6M4H73HW/AL1FpCRQT1XXuK0EfYBFbvnSOBWE
GX7b6Ap8rarpwHZ33IS/jN9nAU7lwVMPD7yBF98aw/iJU2nb/AyqVIomIjKCzXHxbNgcx6Qv3wXgtkHPsW
DpStq2OKYyWeAevvsWXnh9FON/m0zblk2pWrkiERERdOnQhuWr/+b6OwdRoXw5WjZrQmREpNdxAXj
omr4M/fQXxs9cRNvGdalSoSwRfn3YCUn7GTz6W56/7XIiIryf9ysc93E4vpdNkInQ9qnr+POBd49ZVal1fdS
Xznet76VouVL0+eFJts9czoHNwa/g5kWQBhXWBPz72rYCHf0LiEgbIEZVfxGRQXnZ6L+pEIwHXndftKSqHt
PeqKp3iEhH4AJggYgc2wbkEGCFqmY9C8/gX917CximqJ+6g/iezqZ8LNAO2AD8AVQCbsM5eGe83lBVPfbd
lXdH3O8+8rAfReR2nNYRRr40hAHXXZHLM46qUima7QlHxy/uSNhN1UrRx5QZ/ozTWHIoOZk/Zs6lbOlSfP
vLJFqc3oiSJUoA0LVDa5asXBv0D9EqlSsGnHHuSNhFlUoVs2SuyBsvDHYyH0pm0vQ5lC1TGoCBN1zNwBu
uBuCRZ16lTsyx/YknPXOFMmxP3Jv5eGfiPqpWKJulTFlev+9aJ/PhI0yav5KypZx9eyD5MPcM+4x7r+hFi4Yx
wc8bjvs4DN/LJviSt++hZI2j74OS1aNJjt+T+bhI6eKUa1KLXt867+USlctxzkcPMf2mYdS9rDPxU5eiaT6O7N5
HQuxaolvWD5kKwYlUB/yPF67Rqjo6H8+PAIYBN+XndU/4FEZVDwBTcZr3x+UQqoGqzlPVIUACEINzgB6Y
MUBQRKKBNUBlETnTXVZERJrm8NLlgDj35xtzyJaCU3u6EvgTp8XgYY62AEwAbhGR0u7r1RSRKlk2Mxvo5
44lqIozYDA3+4FsO+ZUdbTb7dEuP5UBgGZNGvJPXDxb43eQmprKb1Nn061z+4Aye/buIz3d6X0a8/n3XHZ
uDwCqV6nE/KUrSfP5SE1LY8HSFdSvHfxm1mZNTmPz1m1s3bbdyTx5Bt27BlRg2ZO0NzPze599zWXn9wa
cgWdJe52m+jXrNrJ2/UY6t28T9MxN69Vk845EtibsITUtjd/nLeOc1k0CM+8/mJn5/Z9ncunZrQFITUvjwTfH
cVGXlvRun9Nb9+QKx30cju9lE3y7F2+gTL1qlIqpTESRSOpc0omtExdmrk/dn8y3ze5kfMcHGd/xQXYtXM/0

m4aRuHQjB+N2U7Wr8zcXWaIYldo0ZN+6bV79Ksc4kTEE/scL9ytrZSAO53iaoRZHj4vgHIeaAdPcq+I6AT/
mNrDw347aHwd8z7FXHGR4VUQa4ZyRTwaWAMuB04ClIpIKvKeqI9wBe2+6/f5RwHAguyHETwNfi8geY
ApQL4fXngn0VNVkEZmJs8NmAqjqRBE5HfjT7aI4AFwP+A8p/xboCazEqVwsBPZyfD8B34jIJcC9J2scQVRkJ
I/fO4A7Hn0eX3o6l53Xg4Z1Yxjx4Rc0bdyA7p3bE7t4BW+8PxZBaNviDAbfNwCA3md3Yt6i5Vw+4CEEoUv
7VnTrnOtg03+fOSqSxx+8g4H/HeJkvqA3DevVYcSYz2japBHdu3YkdtEyho/+2MncshlPPHQnAGlpPm64+1
EASpcqyUtPPkxUVPCbs6MiI3ms/wXc+eonpKenc+nZbWhYqwojv5tM07o16damCfNXb+LNr/8AhLaN6/
D4DRcCMGHeChau+Ye9B5L5cZbTx/nsgMtoUqd68PKG6T4Ot/dybgY99RKxi5aSlLSPnpdez1239qffRX29j
nVcg55+hdhFy0jau4+el9/IXbdcR78L+3iWR33pzB/8MT0+fwSJjGD9F9PZuzaOFoP6sXvJRuL8KgdZrf3wDz
q9fjsXTH0JEWH9lzNIWrUlx/IFLUhdBrFAIxGph1MRuAb4T8ZKVd2L0zIOOIPzcca6zT/eRuXYcYAmg4iUVt
UDIlIRZxBlF1Xd/m+3m7J1WdjtdCla3OsI+eLbkPMHSKiKrB/8M/STTVPyNFYpZEjxUl5HyL90n9cJ8uWrVqF
zOWN+XLfts6BMaPFI3Wvz/Xn/yqZxuWYRkfNxTpwjgQ9U9QURReRaYr6o/Zik7jTxUCGymwuP7WUTK4w
xefO5kVAaMMcacOoI1MZGq/gr8mmXZkBzKdsvLNq1CcBx53YnGGGNMdgr91MXGGGOMyV34VAf+xV
UGxhhjjCk8rIXAGGOMCZJwurmRVQiMMcaYINEw6jSwCoExxhgTJNZCYIwxxhi7ysAYY4wx4XWVgVUIjDH
GmCCxFgJjjDHG2BgCY4wxxthVBiYX4XajIAAign8nvJNJk/d7HSH/wmwfh6Uwu1EQEHbvi2J2w7wA1kJgjD
HGGGshMMYYY4y1EBhjjDEGSA+jLhSrEBhjjDFBEj7VAasQGGOMMUFj8xAYY4wxxgYVGmOMMSa8BhV
GeB3AGGOMMd6zFgJjjDEmSGwMgTHGGGPCagyBdRkYY4wxQZJ+Al95ISLnisgaEVknIv/LZv0dIrJMRBaLy
CwROSO3bVqFwBhjjAkSVc33V25EJBIYCZwHnAFcm80B/3NVba6qrYBXgGG5bbfAugxEZDDwH8CHUwka
qKrzRGQT0E5Vd+VxO92Ah1X1QhG5yX3uPScpYw3gTVW9IpdyB1S1dDbLLwXWqurKk5HH36x5C3jpjdH
40tPpd2EfBlx/ZcD6bdt38uTQ4SQm7aNc2dK89OTDVKtSCYBh73zljD9jARh44zWc1/Pskx0v3554cRgzZv9
FdIXy/PDZKK/jZGv2io288tVk0tOVy7q04JZzOwas37Z7L09/8jt7DhyibMkSvHjLBVStUMajtNkLxf08669Fv
DzyQ3zp6Vx+fk8GXHtZwPptOxIY8urIzPfy0Mfup1rligAMe/dTZsxbQLoqZ7Ztwf/uvgUR8eLXyPTE0OHM
mBNLdIVy/PDJ255myatQfF/4q9q9Ba2e7Y9ERrDx82msGfFTwPo6V51NiyHXkhy/B4B1H05k0+fTCjxnXgR
pDEEHYJ2qbgAQkS+AS4DMY4+q7vMrX4o8zJFUIC0EInImcCHQRlVbAL2ALQXx2vmhqttyqwzk4lKc2tpJ5f
P5eH7YO7zz2jP8+Onb/DppOus3bg4o89rI97n43J58//EI7rzpWoa/+zEA0+fEsnLter754C0+f3cYH33xPQc
OHjrZEfPt0vN7M2rY817HyJEvPZ2h4/5g5D1X8N1Tt/B77CrWbwussw77dhoXdmrK10/ezMALzuTNH2Z4l
DZnobaffT4fL7w5hreHDmb8B6/z25RZrN8U+FHw2qiPuah3N74bM4w7+l/JG2PGArB4xWoWrVjNt+/9H
9+PGcby1euZv2SFF79GgEvP68Wo157xOka+hNr7IkCE0PrFm5h13StMOOcRYi49kzKn1Tym2Jbxc5nU+3
Em9X48ZCsDELQug5oEHkO3ussCiMjdIrIep4Xgvtw2WlBdBtWBXap6BEBVd6nqNr/194rIQre/owmAiJQS
kQ9E5C8RWSQil+T1xdztlBfHbhG5wV3+iYj0FpFIEXlVRGJFZKmIDHTX1xWR5e7PJUXkKxFZKSLfi8g8EWnn
9xoviMgSEZkrllVFpDNwMfCq22fT4N/utAzLVq2lds3qxNSoRpEiRTiv59lMmTU3oMz6TVvo0KYFAB3atGC
qu379ps20a9mUqKhISpYozmkN6jJr3oKTFe2EtWvVnHJlQ+ts2t/yTfHEVKlArcrlKRIVSd/2TZi2dF1AmQ3x
u+nQuDYA7RvXZtqSddltylOhtp+XrV5H7ZrViKlR1Xkvd+/C1DmxAWU2/LOVjq2bAdChVTO/9cKRlFRS09JI
SU0jzZdGxQrlC/g3OFa7Vs1Cah/nRai9L/xFt27AgU07OLg5AU31sWX8XGr0bet1rBOmJ/BPRG4Xkfl+X7ef
0GurjlTVBsCjwBO5lS+oCsFEIEZE1orI2yJyTpb1u1S1DfAO8LC7bDAwRVU7AN1xDrSl8vh6s4EuQFNgA3C
Wu/xMYA5wK7BXVdsD7YHbRKRelm3cBexR1TOAJwH/d2QpYK6qtgRmALep6hzgR2CQqrZS1fV5zJqrnQ
m7qValcubjqpUrsXPX7oAyjRvWY9KMOQBMmvEnBw8lk7R3H40b1mPWvIUkHz7MnqS9xC5cyvadCScr
WqG1c88Bqvk1/1ctX4adew4ElDmtVhUmL/obgCmL/+bg4RSSDiQXaM5ws3NXltUqV8p8XLVyRXbsSgwo
c1qDukyaOQ+AybPmue/l/bRq2pgOrZrS48rb6HHVbXRp14r6dWoVaH4TfCWqRZMcd/TzLTk+kRLVKhxTr
uYF7ek1eSid3rufEjWiCzJivqSj+f5S1dGq2s7va3SWzcYBMX6Pa7nLcvIFTgv2cRVIhUBVD+AcUG8HEoAv3f
7/DN+53xcAdd2f+wD/E5HFwDSgOFA7jy85Ezjb/XoHaC4iNXEO8Afdbd/gbnseUBFolGUbXXF2Iqq6HFjqt
y4F+DmbzJ55+O5bmL94OVfcch/zFy+jauWKRERE0KVDG846sx3X3zmIQc+8SstmTYiMiPQ6bqHwUL9uLP
h7C1e/8DHz126hSvnSRER4259dGDw88AbmL13BlQMfZv6SlVSpFE1EZASb4+LZsDmOSV++y+Qv32Xeou
UsWHrSh+uYMBD/x0J+6/AAk3o+xo4Zy2j/xh1eR8pRMAYVArFAIxGpJyJFgWtwTkgziYj/Me0C4O/cNlpgg
wpV1YdzYJ8mIsuAG4GP3NVH3O8+v0wC9FPVNf7bEZGqeXi5GcDdOBWIwcBlwBU4FYWMbd+rqhOybLt
uHn+dVD36v+afOUduk8/tAG+/+iwDbrgmjy8FVSpXDDir35GwiyqVKgaWqVSRN14YDMChQ8lMmj6Hsm
WccY8Db7iagTdcDcAjz7xKnZgaeX7tU1WVCqXZvmd/5uMdSfupUiFwHGmV8qUZdodT6T50OlXJi9ZStmT
xAs0ZbqpUimZ7wtGxGDsSdlO1UvQxZYY/8wgAh5KT+WPmXMqWLsW3v0yixemNKFmiBABdO7Rmycq1
tG1x0oftGA8lb0+kRM2jn28lqkeTvH1PQJkUv9a6jWOn0uKJawssX34FY+piVU0TkXuACUAk8IGqrhCRZ4H
5qvojcI+I9AJSgT04x9zjKqhBhY2z1FZaAf/k8rQJOGMLxN1G67y+nqpuASoBjdxRmLNwuiIyRn1NAO4UkSL
utk/LpjtiNnCVu/4MoHkeXno/kG3HnH8TUH4qAwDNmpzG5q3b2LptO6mpqfw2eQbduwaOeN+TtJf0dO
et995nX3PZ+b0BZxBX0l5nsOmadRtZu34jndu3ydfrn4qa1qnO5p17iNuVRGqajwmxqzmnRcOAMnsOHCl
93akXvv/7PC7tnJe3yKmtWZOG/BMXz9b4Hc57eepsunVuH1Bmz959me/lMZ9/z2Xn9gCgepVKzF+6kjSfj
9S0NBYsXUH92tZlUNjsWbyB0vWqUTKmMlIkkphLOhE/lXDcU/EqR8eO1Ojbln1/b8u6mZBxImMI8rRd1V
9V9TRVbaCqL7jLhriVAVT1flVt6nZhd1fVXEfgFlQLQWngLREpD6QB63DPlo/jOWA4sFREIoCNOFcq5NU8n
JoTOC0DQ3EqBgBjcJr5F7oVjgSO7V95G/hYRFYCq4EVwN5cXvML4D0RuQ+44mSNI4iKiuTxB+9g4H+H4Et
P57ILetOwXh1GjPmMpk0a0b1rR2IXLWP46I8RhLYtm/HEQ3cCkJbm44a7HwWgdKmSvPTkw0RFed9lMO
ipl4hdtJSkpH30vPR67rq1P/0u6ut1rExRkRH87+pe3PnmN6Snp3NJ5+Y0rFGJt3+cxRl1qtGtZUPmr9nCmz/

MQERo26gWj13Ty+vYxwi1/RwVGcnj9w7gjkefd97L5/WgYd0YRnz4BU0bN6B75/bELl7BG++Pdd7LLc5g8
H0DAOh9difmLVrO5QMeQhC6tG9Ft87tcnnF4Bv09CvELlpG0t599Lz8Ru665Tr6XdjH61jHFWrvC3/qS2fx
4x9x1rhHkcgINn0xnX1r4zhjUD/2LNlI/MSFNBzQl+p92qBpPlKSDjL/gdC7dDJDOE1dLHnsrzjluBM/FFHVw
+4VA5OAxqqa8m+3nbrz7/Db6WE27iBt2RSvI+RbVPMeXkfINz180OsI+SJFw7BLJ8z+9sY3f9LrCCfkivixQR
kA1LNWn3x/3k/eOtGTwUh2L4OclQSmut0KAtx1MioDxhhjTh3h1EJgFYIcqOp+wPv2SGOMMWErnG5uZ
BUCY4wxJkjSw6hb3m5uZIwxxhhrITDGGGOCJXzaB6xCYIwxxgSNDSo0xhhjjFUIjDHGGENe700QEqxCYIw
xxgSJtRAYY4wxxuYhMMYYY4x1GRhjjDEG6zIwufi1xVNeR8i3SoTXbRzOSfzT6wj5NiV6gtcR8q1Rw11eR8i
XKRtqeh0h34qF0RkmwCXLnvM6QkixFgJjjDHGWAuBMcYYY2xQoTHGGGMIr5sbWYXAGGOMCRJrITDG
GGOMtRAYY4wxxloIjDHGGEN4tRBEeB3AGGOMMd6zCoExxhgTJHoC//JCRM4VkTUisk5E/pdeJtT6AAAg
AElEQVTN+odEZKWILBWRySJSJ7dtWoXAGGOMCZJ01Xx/5UZEIoGRwHnAGcC1InJGlmKLgHaq2gL4Bnglt
+1ahcAYY4wJkiC1EHQA1qnqBlVNAb4ALgl4XdWpqnrIfTgXqJXbRq1CYIwxxgSJanq+v0TkdhGZ7/d1e5bN
1gS2+D3e6i7Lya3Ab7llPeWuMhARH7AM53ffCPRX1SQRqQG8qapXeBowB1W6t6D5czdAZASbx07l7xE/
BayPufpsmg75D4fjEwHY8MFENn8+DYBOnz9KdNuG7P5rDfP6v1Zgmct3b0X9526GyAh2jJ1M3IgfAtZXu
bobdYf054ibefsHv7Pj88kAdI77koOrNgOQEreLVTe+XCCZ+/bpxrBhzxIZEcEHH47jlVdHBqw/q2tH/u//nqF
F89P5z/V38d13vwBQu3ZNvvn6fSIiIihSJIqRIz9k9HufBj1vhe6taPDczUhkBNvHTmZLln1c9epu1BvSnxR3H
2/74De2fz4lc31k6RK0m/E6u36PZf3j7wc9L0Cxju0pe/89EBHJoZ9/4eBn444pU7xHN0rffCMAaevWk/TM
8wBUmz6JtA0bAfDt2MGe/z1RIJmrd2tBu+f6IxERrBs3jZVZ/v4yxJzfnrPH3M9v5z5J4tKNSFQknV4bQHTzu
khUBBu/nsWKHJ4bLFW7t6DVs/2RyAg2fj6NNVlev85VZ9NiyLUkx+8BYN2HE9n0+bQCzZibJ14cxozZfxFdo
Tw/fDbK6zj5ciL3MlDV0cDok/H6InI90A44J7eyp1yFAEhW1VYAIvIxcDfwgqpuA0KyMkCE0GLozcy5aijJ8bs
55/fn2T5xIfvXxgUUixs/l2WPf3TM09e9/TORJYpR94YeBRQYilig/tABrLjqWVLiE2n5+0skTpxP8tqtAcV2jZ/
DhmwOROmHU1jSa1BBpQUgIiKCN994gXPPv5atW+OZ++ev/PTzRFat+juzzOYtcdw64EEeevCOgOfGx++k
61kXk5KSQqlSJVmyaAo//TyR+PgdwQxMw6G3suyq5zgSn0jr34eye+J8DmXZxwnj5+R4sK/76DXsnbsqeB
mzioig7EP3k/jgIHw7E6g0ZhRHZs0hbdM/mUUia9Wk9PX/Yfdd96L7DxBRvnzmOj2Swq6bbyu4vIBECO1f
vJEp17zEofhEzv31WbZOWMC+v7cFlIsqVZwmA/qya8G6zGV1LupARLEofun5GJElinLhtJfZ9MOfHNxaQH
eJjBBav3gTM68eyqH4RHr+9hzbsvns2DJ+LosHf1wwmU7Apef35j/9Lubx5wruhOZkCdLdDuOAGL/Htdxl
AUSkFzAYOEdVj+S20VO9y+BP3GYWEakrIsvdn28Ske9E5HcR+VtEMgdjiMitIrJWRP4SkfdEZIS7/EoRWS4i
S0RkxskMWaF1Qw5u3MGhzTvRVB9xP/xJtb5t8/z8XbNWkHYw+WRGylWZ1g05vHE7RzbvRFPTSPhhNtF
92xdohvzq0L4169dvYuPGzaSmpvLVV+O5+KK+AWX++Wcry5atIj09PWB5amoqKSnOLaKLFStGRETw/7T
KtG5I8sbtHPbbxxX7tsvz80u3qE+RyuXYM31JEFMGKnJ6E3xbt+HbFg9paSRPmkKxrl0CypS86EIOfvcDuv8
AAOlJSQWWLzsVWzdg/6YdHNicQHqqj3/GzyUmm7+/lo9cwYqRP+M7kpq5TBWiShZDIiOILF6U9JQ0Ug8
U3N9idOsGHNi0g4ObE9BUH1vGz6VGPj47QkW7Vs0pV7aM1zFOSDqa7688iAUaiUg9ESkKXAP86F9ARF
oD7wIXq+rOvGz0lK0QuKM0e5JlJ/ppBVwNNAeuFpEYt1vhSaAT0AVo4ld+CNBXVVsCF5/MrMWrVyB52+
7Mx8nxiRSvHn1MuRoXtKfblJdoP+Z+itc4dn1BKlo9mpRtR8+CUuJ3UyybzBUv6ESrKf9H4zH/pWiNipnLI4
oVpeWEl2nxy4tEn1swFYkaNauxZevRs76tcfHUqFEtz8+vVasGCxf8waYNsbz62sjgtg4AxapHc8TvfXEkPpGi
1SseU67SBR1pM+U1Th/zX4pl7GMR6j99Axue+SSoGbOKrFwJ386jn03pCQlEVq4UUCYqphZRMTFUfPstK
r47kmIdj/7/S9GiVBwzyll+VmBFIlhKVKvAoW2JmY8PxSdSonqFgDIVmtelZI1otk1eHLB8889/kXboCJcvHsF
lscNZNepXUpIOFkhugBLVokmOC/zsKFGtwjHlal7Qnl6Th9Lpvfsp4fFnR2Gjqvn+ysM204B7gAnAKuArVV0
hIs+KSMbx51WgNPC1iCwWkZyOdZlOxS6DEiKyGKdlYBXwRw7lJqvqXgARWQnUASoB01U10V3+NXCaW
3428JGIfAV8F8T82do+cSFx388hPSWNOv170ObNO5lzxQsFHSNfEifOJ+H7WWhKGlX796bRm/ew4opnA
Jjf7k5StidSrHYVmn37NIdWbebwP8E9wP5bW7duo03b3lSvXpXvvnmfb7/7hZ07C6hpOAe7J85np7uPq/f
vReM372HpFc9Q4+a+JE5emDm2IKRERhIVU5Pd9z5AZJXKVBzxBgk33oIeOMjOK64hfdcuImtUJ/qNYSSu
34hv27bctxlMIrR96jr+fODdY1ZVal0f9aXzXet7KVquFH1+eJLtM5dzYHOCB0GzF//HQrb84Hx21Ovfg/Zv3
MGMK1/0OlahEayZClX1V+DXLMuG+P3cK7/bPBVbCDLGENQBBGcMQXb8+1t85FJ5UtU7gCdw+nUWiEj
AqZr/qNEJh9Zlu42cHI7fQwm/s+cS1aMzBw9mSN1zgPSUNAD+GTuV8i3q5es1TraU+ESK1jh65le0esXM
wYMZ0vYcQN3MO8ZOpnSL+kefv90pe2TzTvbOWUGp5sH/fbbFbSemVo3Mx7VqVmfbtu353k58/A6Wr1
hD164dT2a8YxyJTzx6xo/TYpASvzugjP8+jh87JXMfl217GjVuPo8OsSOpP6Q/Va88m7qDrwtqXgBfwi4iq1T
JfBxRuTK+hF1ZyiRweNYc8PnwxW8nbctWomo5V0yl73LK+rbFk7JoMUVOaxj0zMnb91DS76y5ZPXozAF4
AEVKF6dck1r0+nYwl8x7nUptGnDORw8R3aIedS/rTPzUpWiajyO795EQu5bolvWze5kgZU+kRM3Az47k7
XsCyqT4fXZsHDuVCh5/dhQ2wZqYKBhOxQoBAO71mfcB/xWRvLaUxALniEgF9zn9MlaISANVnefW0BIIHP
CBqo5W1Xaq2q5vyfx9iCUtXk+p+tUoWbsyUiSSmpeeyfaJCwLKFKtydOBV9b5t2f/3MeNLCtT+xesoUb86x
WpXQYpEUfnSLiROjA0oU8Qvc3TfdiS7mSPLlUKKOv8lUdFlKNu+yTED5YIhdv5iGjasR926MRQpUoSrrrqE
n36emKfn1qxZneLFiwNQvnw5unTpwNq164MZN3MfF/fbx7snzg8oU9RvH1fs245Dfzv7cfXdb/JXuzv5q/
3dbHj2U3Z8PYNNL4wNal6A1NWriYypSWT1ahAVRYlePTgye05AmSMzZ1G0dSsApFxZomJqkbYtHilTGoo
UyVxetHmzgMGIwbJ78QbK1KtGqZjKRBSJpM4lndg6ceHR32l/Mt82u5PxHR9kfMcH2bVwPdNvGkbi0o0c
jNtN1a5NAYgsUYxKbRqyb13BtWjsWbyB0vWqUTLG+eyIuaQT8RMCPzuK+71HavRte8xgSfPvBKPLIFhOx
S6DTKq6SESWAtcCM/NQPk5EXgT+AhKB1cBed/WrItIlp9VhMnDSRmqpL52lj3/EmeP+h0RGsHncNPavia
PJl1eQtHgD2ycupP6AvlTr2xZN85GSdIBF9x9tvuz6wxBKN6pBVMni9Fn4Foseeo+EaUtPVrzs+dLZ8PgYmo

57AiIj2DluCslrtlL7kas5sHg9iRPnU2PA+UT3bY+m+UhLOsDf948AoGSjWjR49XZIV4gQtr71/TFXJwQlss/H/
Q88wa+/fE5kRAQfffwlK1eu5emnHmb+giX8/PMftGvbkm++fp8KFcpx4QW9eWrIf2nZqgenN2nIK68MQ
RVEYNiwUSxfvjrIgdNZ9/j7NBs32LnscNxUDq3ZSp1Hrma/3z6u2Ldd5j5ec//I3Lcb5Mz7hr1J9LBXICKC5F9
+I23jJkrfejOpq9dwZPYcjsyLpWj79lT69ENIT2ff26PQffso0qwp5QY9RMZOPvDZuAKpEKgvnfmDP6bH548
gkRGs/2I6e9fG0WJQP3Yv2UicX+Ugq7Uf/kGn12/ngqkvISKs/3IGSau25Fg+GNkXP/4RZ417FImMYNMX0
9m3No4zBvVjz5KNxE9cSMMBfanep4372XGQ+Q+E3mV9g556idhFS0lK2kfPS6/nrlv70y/LgN9QdSKXHXp
FvKyNhCMRKa2qB9wWgu+BD1T1+/xsY3y1/4TdTq9EitcR8uWcxD+9jpBvU6I7ex0h3xo19HaMRH5N2XC
8uVtCU7Ew+4y+ZNlzXkc4IUUq1ZdgbLdS2dPy/R+4a9/aoGTJzSndQnCCnnav7SwOTAR+yKW8McaYU1Q
43f7YKgT5pKoPe53BGGNMeAinVnirEBhjjDFBEk5jCKxCYIwxxgRJOLUQnLKXHRpjjDHmKGshMMYYY4LEB
hUaY4wxxtOZB/PLKgTGGGNMkFgLgTHGGGPCalChVQiMMcaYILEuA2OMMcZYC4ExxhhjrEJgjDHGGAijD
gO722GhIyK3q+por3PkVbjlBctcEMItL1jmghBuecONzVRY+NzudYB8Cre8YJkLQrjlBctcEMItb1ixCoExxhhjr
EJgjDHGGKsQFEbh1r8WbnnBMheEcMsLlrkghFvesGKDCo0xxhhjLQTGGGOMsQqBMSYEiEixvCwz/46I1
MvLMnNqsgqBMYWQiEzOy7IQ8mcel4UMEemSl2Uh5ttsln1T4ClMSLKZCgsBEakM3AbUxe//VFVv8SpTT
kQkEnhZVR/2Okt+iMhkVe2Z2zKviUhxoCRQSUQqAOKuKgvU9CxYDkSkGk6uEiLSmsC8JT0LljdvAW3ysMx
zItIEaAqUE5HL/VaVBYp7kyr/3Pd0jKou9TpLYWQVgsJhPDATmAT4PM5yXKrqE5GuXufIq3A7wAIDgQeAG
sACjubdB4zwKtRx9AVuAmoBw/yW7wce9yJQbkTkTKAzUFlEHvJbVRaI9CZVrhoDFwLlgYv8lu/HOZkIWSIy
DbgY53i1ANgpIrNV9aHjPtHkm11lUAiIyGJVbeV1jrwSkXdwDqZfAwczlqvqd56FyoGI3M/RA2wcgQfY91Q
1FA+yiMi9qvqW1znySkT6qWp2zdkhR0TOAboBdwCj/FbtB35S1b+9yJUXInKmqoZ0V0xWIrJlVVuLyACc1
oGnRGSpqrbwOlthYxWCQkBEngfmqOqvXmfJCxH5MJvFGopdHBnC7QALICKdObYb6RPPAh2HO4CwH8f
mfdarTLkRkTqq+o/XOfljnLoXM4jIMqAP8DEwWFVjrUIQHNZlEMZEZD/OzbQEeFxEjgCp7mNV1bJe5suJq
t7sdYb8UtW3wuwA+ynQAFjM0W4kBUIyL063116cJuEjHmfJq2IiMppj3xM9PEuUu7DpXvTzLDABmOVW
BuoDIdsKE86shcAUOBE5DXgHqKqqzUSkBXCxqj7vcbQc5XSAVdX7vEuVMxFZBZyhYfIHLiLLVbWZ1znyQ0
SW4HQZLMDv4KqqCzwLlYtw6140BctaCAqBcBkB7+c9YBDwLoCqLhWRz4GQrRAA7QijAyywHKgGxHsdJI
/miEhzVV3mdZB8SFPVd7wOkU8/i8j54dK9CCAib2azeC8wX1XHF3SewswqBGHMHQFfivAZAZ+hpKr+JSL
+y9K8CpNHYXGAFZGfcLoGygArReQv/JrgVfVir7Jlx+0fVpzPoptFZANO3oxur5DrJxaRaPfHn0TkLuB7Avdxo
ifBjiNcuxddxYEmOlOQwRlrshFoKSLdVfUBz5IVMlYhCG/+l5gt9FseqpeYZdgllg1wPqAQkSsI0QNtuB1ggde
8DpBPF3od4AQs4OjBFZzWrgwK1C/wRLlQ1TJeZ/gXWgBdVNUHmVcpzQS6AuHUohTybAxBIRBuI+DdQU
Gjca7l3oNT278uFEdsu5eY5UhVpxdUlsLM76zb335VTS3wMIWYiGQ3adJe4B9VDclWOhFZA3RQ1b3u43
LAX6raOOOSRG8TFh7WQlA4xGWZfQycP/JlqrrTi0C5UFXtJSKlgAhV3R+q86mH6wHfr4nY315gPvBfVd1Q
8KmOayEQg1NBFJwJdLaLyA7gtlAcqJfN3xyE9t8dwNs4MylmnFk3x+kOKycid6rqRM+S5ewVYLE7QZEAZ
wMvup8fk7wMVthYC0EhICK/AGcCU91F3XCaNesBz6rqpx5Fy5aILFTVNlmWLVDVtl5lyk24HWBF5DlgK/
A5zofoNThXSSwE7lTVbt6lO5aIvAd8o6oT3Md9cPqKPwTeUNWOXubLTrj93QGIyHfAk6q6wn18Bs5lfY8A
34XqFQgiUh3o4D6MVdVtXuYprKyFoHAoApyuqjsARKQqzvXmHYEZQEh8MIX5fOrDyfkA+wHOwSCUXKy
qLf0ej3YvOXtUREJxSuBOqpo5ha6qThSR11R1YAjf9TCKMPi7y+K0jMoAgKquFJEmqrohyyDfUBMBJODs8
4Yi0lBVZ3icqdCxCkHhUCvjQ8m1E2eKz0QRCaU+2LCdT53wO8AeEpGrOHonuyuAw+7PodgsGC8ijwJfuI+
vBna4N8NK9y7WccWEyd+dvxXuoDz//bzSrXSFZGYReRkn5wqOvhcUp9JlTiKrEBQO00TkZwIvy5nm9rEle
RcrkHvN8PhwnE+d8DvAXge8gdNnrMBc4HoRKQHc42WwHPwHeAr4wX08210WCVzlVahchMXfXRY3AX
fhXJ0Ezn5+GKcy0N2jTLm5FGisquEyg2XYsjEEhYA4bX39glx7sc8Gvg3VSXTCdKbC+jgH2DM5eoB9EOeGR
21VdZaH8YwHwu3vLlyJyG/Alap6wOsshZ1VCEyBE5HpuDMVZlwyFI5T14YiEXlEVV8RkbfIpuUi1KZaFpHh
qvqA33wPAUJwnoewJCJfqepVfhNBBQjFCaAyiMi3QEtgMoFzglTUe7kwsC6DQsAdoPcyUAVnwFuozz4W
NjMVhtsBFljlfp/vaYq8yxh4FzYTKonILFXtms2VJ6H8d3e/+z0cJ4L60f0yQWYVgsLhFeAiVV2Va8nQEDYzFR
JmB1hV/cn9/jGAiJRU1UPepspZxvwCqjrdHd9QW1XXeBzruFS1q/s9bGb/U9V49/s/IlIHaKSqk9x9HtLHgYz
3sgk+6zIoBERktqp2yb1kaMhhpsLrVXWTl7nyItQPsBlE5EzgfaC0qtYWkZbAQFW9y+No2RKRi3BaCYqqaj0
RaYVzLX9IdxmISFecg+uHIlIJKKOqG73OlRMRuQ24HYhW1QYi0ggYFYo3Qgvnbo5wZRWCQkBE3sC58c4P
BPaxfedZqDzwn6nQ6yy5CcMD7DycKyF+DIdxGiKyAOgBTPPLu0xVm3ubLGci8hTOXTAbq+ppIlID+DqUK+
cishhngp95ob6fRaS6qsa7LRrHCMWpzsNdSDcVmTwrCxwC+vgtUyAkKwQiUh64AagLRGWMJQjB/nh/w
4G+uH2ZqrpERM72NtLxqeqWLOM0fF5lyYNUVd2bJW+on61cBrTGvbGYqm4TkVDvRjiiqikZ+1lEogjR/ezf
zeG/XEQigGsBqxCcZFYhKARU9WavM+TTrziX7S0jdCedOUaYHWC3iEhnQEWkCM6gslAeY7JCRP4DRLrN
2PcBczzOlJsUVVURyRgLU8rrQHkw3Z1Iq4SI9MaZk+AnjzNlS0TKAnfj3Mr9R+APnDk0/gssAcZ6l65wsgpBI
RCG1/UXV9WHvA6RT+F2gL0DZ96EmjhzJUzE+XANVfcCg3G6vMYBvwOh+v7N8JWIvAuUd/vmbwHe8zh
Tbv4H3IpTGR+IUzkf42minH2KM8boT2AA8DjOlRyXqupiL4MVVjaGoBAIt+v6ReRB4ADwM4FjHhI9C5UL
d8DYG0AvnA+licD9qrrb02A5EJHiqno495KhQUQaqOp6r3Pkl3uW3QfnPTFBVf/wONJxiUhPYI6qJnudJTf+
YxvcKazjca5CCZv3dbixFoLCIWyu63elAK/inBFm1EgVqO9Zolyo6i6c6YDDxXJxbh080/2ape795EPUByJSC4
jFyTtDVZfl8hxPicitODkHeZ0lH24A3hGRRNz9jPPe2ONtrGxl3ltBVX0istUqA8FlFYLClZyu6wenD7Che5ANa
TlNSJQhVAdCqmpDEakNnAVcAIwUkSQN0dvbquo5IIIUaI9z58hfRKS0qkZ7m+y4agPvikhdnNsezwBmhnJ
ztqreCOBeEXEFMBKoQWgeC1qKyD73Z8EZ97CP0J4AKqyF4pvA5N/dONf1NxGROJzr+kP5bHYdzlUR4cB/
QqJncG7AE/Lcs+0uOBWCljh3igvZ+y241/Of5X6Vx+lOmulpqFyo6lMA7uQ+t+F02w3HuSFTSBKR63H2cX

NgFzCCEN3Pqhqy+7GwsjEEhYj/df0i8oCqDvc6U3ZE5HugKTCVMJqbXEQWZYzRCHUiko7T/P6ie5fJkCYiaT
hn2UOBX1U1xeNIuRKRJ3AqXaWBRTgVrpkZl8uFIhHZBawHRgFTw2EyMFNwrEJQSInIZlWt7XWO7IjIjdkt
D/UpSkVkoaq28TpHXrgTJ3UFzsZp2v4bmK6q73saLAfu3BRdcPK2x7kc9U9VfdLTYMchIgtxxur8AkzHyRvy
t+gVkaY4+7kr0AhYo6r9vU1lQoF1GRReknsRb4T6gb8wcCdOWo9zNngWcD1wDs5siyFHVZNEZAMQA9T
Cmda6iLepjk9V27jXyncBegOjRWRnxr0OQpGbtzZQB2disHKE0VwgJrisQlB4hWzTjzvxzFDgDKB4xnJVDb
mrDLLc0a5klkFOITuwSUTmA8VwJveZCZwdylO9upWB1ThZ3wFuDvVuAxFphlPZOgdnCuMthGh/vJ9Zfl8j
VHWrx3lMCLEugzCWze1XM1cBJVQ1JCt8ljILZ3De68BFwM04Yx+GeBqsEBGRyqqa4HWOvBKRCFUNqzN
VEfkZ97I9IFZVU3N5ijEhzSoEpsCJyAJVbZtl4pEFqtrW62zGGHOqCskzSFPoHXFvUPK3iNyDM7VuaY8zGW
PMKc1aCEyBE5H2OPcBKA88hzOw6RVVnetpMGOMOYVZhcCYQkhESuLMCFlbVW9zB3I2VtWfPY4WQE
SOe5MrVR1WUFkKs3CdcdMULOsyMAVGRIar6gMi8hPZfDip6sUexCqsPsSZ6OdM93Ec8DXODIChpIz7vT
HO/AM/uo8vAv7yJFEeiUhl4FGOvVqmh2ehcjY/9yLmVGcVAlOQPnW/v+ZpilNDA1W9WkSuBVDVQ5Ll7l
ehQFWfARCRGUAbVd3vPn4aZ8KfUDYW+BLnXhF3ADcCIXllh839YfLCKgSmwKjqAvf7dPfsinC6NC7MpLh
z7Gfc8KoBftNEh6CqOHfBzJDiLgtlFVX1fRG5X1WnA9NFJNbrUNnJqVUug7XOGbAKgSlg7pnfPUCE81DSgL
dU9VlPgxU+TwG/AzEiMhZnNr2bPE10fJ8Af7n3uQC4FAj1s9qMeQfiReQCYBsQqndntFY5kysbVGgKjDuA
7DzgdlXd6C6rjzMz3e+q+rqX+QobEakIdMKZqGpuqN9uWkTa4Mz8BzBDVRd5mSc3InIhzsyEMcBbQFng
GVX98bhP9JjbclRbVdd4ncWEFqsQmAIjIouA3lkPTG73wcRwuZNgKHMPqjlS1YUFlSW/3FsgN1LVD933R
OmMimOoEZFI4L5wq8SKyEU4rQVFVbWeiLQCnrUuAwNWITAFSESWq2qz/K4zeSciU4+zWkN0BDwi8hT
O/QAaq+ppIlID+FpVu3gcLUci8peqdvA6R36IyAKgBzAtowLuP2OoObXZGAJTkI53s5qQvpFNuFDV7l5nOE
GXAa2BhQCquk1Eyhz/KZ6bLSIjcK40OJixMJRbYYBUVd2b5YITOys0gFUITMFq6Xe3QH+C33Xc5t8TkSLAn
Tj3vQeYBrwbwjfgSVFVFZGMqyJKeR0oD1q53/0HxCrOGXioWiEi/wEi3cmq7sO5I6Yx1mVgTGEkImOAIhw
dqd8f8KnqAO9S5UxEHgYaAb1xbo19CzBOVd/0NFgh485gORjog1MRnwA8p6qHPQ1mQoJVCIwphERkia
q2zG1ZqHAnTepF4IFqhqqG7NwJIlIVeBGooarnicgZwJmq+r7H0Yw5IdZlYEzh5BORBqq6HjIv7/R5nOl43lf
VW4A/AESkNPAr0NPTVMf3Ec4U0YPdx2txxhOEbIVARE4DHgbq4vf5H6qDTU3BsgqBMYXTIGCqiGzAOe
OuA9zsbaTjihORt1X1LhGpgDNt8Xteh8pFJVX9SkQeA1DVNBEJ5UoXOPezGAWMIbQriMYDViEwphBS1c
kZdzh0F60J5eZ3VX1SRF4RkVFAW+AlVf3W61y5OOhO/pQxELITsNfbSLlKU9V3vA5hQpONITCmkBKRzhz
bNPyJZ4GyISKX+z8EnsS5y+HvAKr6nRe58sKdBOotoBmwHKgMXKGqSz0Nlg0RyZhS+T5gJ/A9fve2UNVEL
3KZ0GIVAmMKIRH5FGgALOZo07CG2n3vReTD46xWd1xByBKRKJxWGMFphQnJyzpFZOP/t3c/IVKXcRzH
3x9nMQJLly4KspVIlP2hLKkMPGQRRnRpSb14yoJCw4g6dLCCIKI6FEQusbBBbSVL7CEID4sRaVlrRqH0B/pf
HkS3IgoSvh2eZ9qxdnZnNp3nt7OfF8zhN4oNuWwAAARWSURBVMPA57Cz853n9zzfL2klY6qJlxERKzocyS
rIBYFZF5J0BFgV/oCfMZLuA16JiIl83QtsjogXyiYzm50FpQOY2RnxGbC0dIhWSRqStKThulfSYMlMLdhaLwY
AIuIEsLVgnqYkrZG0tOF6i6RRSc813E6wec6bCs26SMPc+3OAw5IOcOq94qoOsbni31+ukqo+7KomSfVVm
DzwaGHhTM3sIvV5QNI64ElgG6nb4gDQXy6aVYULArPuMlfn3i+Q1Jt/Zdc3wVX9/9PbwOuSduXre/JzVVR
r2Di4ERjIpzhGJB0qmMsqpOofODNrz1Wk3vQHI+Jk6TBteAbYL2k3aeNbP/BE2Ugzehi4mzQzAlJTpZfKxZl
WTVJP/ptYT8pd5+8BA7yp0KyrSHoaWAtcDHwKvEcqEPZV/WhZbv1b75g3FhGHS+ZpR17RWF7Fl4cAkh4
BbgWOAX3A6jxMaiUwVOUx09Y5LgjMupCkhcA1pOLg+vyYiIhVRYM1IaIvqucj4rtOZ2mVpL3A7aRf2OOk
8/37ImJHyVzN5MZJy4A9EfF7fu4iYFHFRzZbh3ipyKw7nQ2cCyzOj59IKwZV9Ra54x8p+4XA58ClxRLNbHFE
/CrpLuDliNgpqZIrBAAR8f4Uz31RIotVkwsCsy4iaYD0Jfob8AHpdsGz9c16VRURlzde5y6A9xaK06oeScuAO
5kccGQ2Z7kPgVl36QPOAo4CPwI/ABPTvqOC8hL2taVzzOBx0pjmryLiwzxR8svCmcxmzXsIzLqMJJFWCdb
mx2XAcWB/ROwsma0ZSQ80XC4AVgPnRcQthSKZzTsuCMy6lKTlwA2kouA20hfskunfVYakxkLlJPANMBIR
f5ZJ1JykhyLiKUnPM7nv4R9Vmxdh1irvITDrIpK2M7ky8Bf5yCEwSIU3FUbEY6UztKF+HPKjoinMTjMXBGbd
5QJgN7AjIn4unKVl+fjbg/x3XPONzd5T0AZJJyJiqHQQs9PJtwzMrDhJnwAvks7z18c1ExHjxUI1Iel+YBPpTP8
bwHBEfFw2ldn/54LAzIqTNB4RV5fO0Q5J55MKg02k3gnDpOLAZ/ttTnJBYGbFNIze3U7q9Pcmp05nrHS75
bo8mXGQNLWxVjqP2Wy4IDCzYiR9TdqprylejohY0eFILZPUA2wgrRCsB/aSVghGS+Yymy0XBGZmbZB0M
7CZNCzoAPAaMFqfD2A2V7kgMLNiJK0Bvo+Io/l6C3AH8C3waBVvGUgaA14l9UmodEtos3a4IDCzYiQdBG
6KiOOS1pF+bW8DrgQuiYj+ogHN5hH3ITCzkmoNqwAbgYGIGAFGJB0qmMts3vFwIzMrqZY350HamDfW8
Jp/sJh1kD9wZlbSMPCOpGPAH8C7AJJWAr+UDGY233gPgZkVJek6Ute/PfWd+rmV8aI8BtnMOsAFgZmZm
XkPgZmZmbkgMDMzM1wQmJmZGS4IzMzMDBcEZmZmBvwNx0mjvFNRrAQAAAAASUVORK5CYII=\n"
       },
       "metadata": {
        "needs_background": "light"
       }
      }
     ]
    },
    {
     "cell_type": "code",
     "source": [

```
      "sns.pairplot(data.head(),hue='Height')"
     ],
     "metadata": {
      "colab": {
       "base_uri": "https://localhost:8080/",
       "height": 1000
      },
      "id": "4BLYBhqWK-Xv",
      "outputId": "165fb22c-7ef4-4e86-8163-454c852057cf"
     },
     "execution_count": 18,
     "outputs": [
      {
       "output_type": "execute_result",
       "data": {
        "text/plain": [
         "<seaborn.axisgrid.PairGrid at 0x7f39eeaadad0>"
        ]
       },
       "metadata": {},
       "execution_count": 18
      },
      {
       "output_type": "display_data",
       "data": {
        "text/plain": [
         "<Figure size 1324.62x1260 with 56 Axes>"
        ],
        "image/png":
"iVBORw0KGgoAAAANSUhEUgAABSMAAATXCAYAAAAVwmAHAAAABHNCSVQICAgIfAhkiAAAAAlwSFlz
AAALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6
Ly9tYXRwbG90bGliLm9yZy+WH4yJAAAgAElEQVR4nOzdeXxcd33v//dnRvtmW4tt2ZIty2ucPRFOsxACCYk
pkLC1DdAL9Lal3MY3FEKasKUhQGmgrCWUhpLfbaHBUMJiwGCSkIQkkMRKCTF24niLF3nT4kXWPjOf3x8
aK5JHcmxpdM7M6PV8PM4jOt855+g9zkdzZj5zFnN3AQAAAAAAAAMBki4QdAAAAAAAAAMDUQDAAAAAAAAA
AAAAAAQCBoRgIAAAAAAAAAIBM1IAAAAAAAAAAIGgGQkAAAAAAAAgEDQjAQAAAAAAAARiSjQjV65c6c6ZK
YmIKaThs1yhTwNC7UKVPA07hQp0wBT6eNGmUKeBoX6pQp4GlcqFOmgCek0ZRoRra1tYUdATgpahTZg
DpFNqBOkemoUWQD6hTZgDoFsteUaEYCAAAAAAAACB/NSAAAAAAAAACByAs7AAAgfQ51HNbzG7eo7
WCH6ubN0bIzF6u4pCjsWMAIu17co82btioeT2jJGQvVuGh+2JGAEQb6B/T8pq3auX23ps+o0LKzlqi6pjLs
WMAIba3ten7jVh1qP6z5jfVatnyRCgoLwo4FjLBj20698Nw2mZmWLl+s+Qvqwo4UmAP7WvX8xi3q7Dy
mxkXztXT5IkWj0bBjARmBZiQA5IjOo8f0lTu/oftW/3Ro7KOf+oD+5J3XKhLhQHhkhq0v7NDfvPMmtR5sly
SVV5TpG/d+QcvPXhpyMuAlD93/uG6+4Xa5D16v/vLXXKxPfO7vVVVNQxKZoaP9sD710S/qV+seHRq78ys
f1+uuuyrEVMBIz23cor+6/u/UefSYJKmyarq+ce8XtXhZY8jJJt/+vQd08w2f0O//Z6MkKRqN6q7/d6cuufwV
IScDMgOfTgEgR2x9YceIRqQkff5TX9PunXtDSgSkevj+x4cakdJgE/373/npUNMHCNvB/a36x9u+NKImf/2r3
2rzpq0hpgJGeuH5bSMakZL0mX/4ivbvPRhSIiDVj767dqgRKQ020R/4+SMhJgrOpg0vDDUiJSkej+tzd3xVR
w4fDTEVkDloRgJAjhj+Zu+43t4+dXd1h5AGGN32LTtTxl54bpvisXgIaYBU3d296mg7lDLeeST1NRYIy9HDnS
ljhw8dUXd3TwhpgFSJREIvPL8tZXzblheDDxOC0ZqOLbv3qae7N4Q0QOahGQkAOWJeQ52KS4pHjC05Y6F
q584KKRGQ6sqVl6eMveXPXq+8fK4cg8wwa3aNLr/y4hFjeXlRzW+sDykRkKphYX3K6+bFr2zS7NqakBIBI0
UiEb35T/84ZfyaN7w6hDTBW7i4QWY2YuyNb71GVVx/GJBEMxIAckZDY72+9v/u1OKlg9fh+aPLmvSPX/q
ops+YFnIy4CVNF52rm29bpbLyUhUVFep9f/ceXf6ai19+RSAgxSVFuumjf6urXvcqmZnq6mv1lW9+Zkpc4w
zZY9GSBbrrnn9S/fy5MjO95prLdMvtN6qktCTsaMCQS69YoRtu+t8qLi5SaVmJbvro3+oVF58fdqxAnHHWE
n3+Xz+hmbOqFY1Gde3bVuo9f3O98vnyFZAk2VS4RlNTU5M3NzeHHQNTh738liNRo0inw4eO6Fhnlyqrp
o/1oeS0a1SiTpFe+/ceVCKR0Ow5M8e6wRJ1ilD19vap7WC7SkqLVVk1Y6zF2OcjVB3th9Xd1a3qmkoVFRe
NtgivpQiVu2v/3oMyk2bPGfNsnZyt07bWDvX29GrW7BrlF+SHHQcTM646xehoywNAjpk+YxpHQyLjzZ4z
M+wIwEkVFRWqbt6csGMAJ1VZNV2VVdPDjgGMycym9CWDqjktGxgVp2kDAAAAAAAACATNSAAAAAAA
AACBoBkJAAAAAAAAIBA0IwEAAAAAAAAEgmYkAAAAAAAAgEDQjAQAAAAAAAAQCJqRAAAAAAAAAAA
JBMxIAAAAAAAABAIGhGAgAAAAAAAAgEzUgAAAAAAAAAgaAZCQAAAAAAACAQNCMBAAAAAAAABIJmJ
AAAAAAAAIBAhNKMNLOVZrbZzLaa2a2jPP4eM2s1s2eS018Ne+zdZrYlOb072OQAAAAAAAAAxisv6F9oZl
```

FJd0l6raQ9ktab2Rp333TCot9191UnrFsp6R8kNUlySU8n1z0UQHQAAAAAAAAAExDGkZErJG119+3u3i9p
taTrTnHdayTd7+4dyQbk/ZJWTlJOAAAAAAAAAGkURjNyrqTdw+b3JMdO9FYze9bMvm9m9ae5LgAAAA
AAAIAMk6k3sPmJpAZ3P0eDRz/+x+luwMzea2bNZtbc2tqa9oDARFGjyAbUKbIBdYpMR40iG1CnyAbUKZ
AbwmhGtkiqHzZflxwb4u7t7t6XnP13SRee6rrDtnG3uze5e1NNTU1aggPpRI0iG1CnyAbUKTIdNYpsQJ0iG
1CnQG4Ioxm5XtJiM1tgZgWSrpe0ZvgCZlY7bPZaSc8lf14n6Wozm2FmMyRdnRwDAAAAAAAAkOECv5u2
u8fMbJUGm4hRSfe4+0Yzu0NSs7uvkXSjmV0rKSapQ9J7kut2mNknNdjQlKQ73L0j6OcAAAAAAAA4PQF
3oyUJHdfK2ntCWO3Dfv5w5I+PMa690i6Z1IDAgAAAAAAEi7TL2BDQAAAAAAAIAcQzMSAAAAAAAAQC
BoRgIAAAAAAAAIBM1IAAAAAAAAAIGgGQkAAAAAAAAgEDQjAQAAAAAAAASCZiQAAAAAAACAQNCMB
AAAAAAAABAImpEAAAAAAAAAAkEzEgAAAAAAAEAgaEYCAAAAAAAACATNSAAAAAAAAACBoBkJAAAA
AAAAIBA0IwEAAAAAAAAEgmYkAAAAAAAAgEDQjAQAAAAAAAAQCJqRAAAAAAAAAAJBMxIAAAAAAAB
AIGhGAgAAAAAAAAgEzUgAAAAAAAAAgaAZCQAAAAAAACAQNCMBAAAAAAAABIJmJAAAAAAAAIBA0I
wEAAAAAAAAEAiakQAwilhvnwa6e8KOAYwq1tOnge7esGMAgUvEYho41q1ELBZ2FGSJWE+fYj28XiLzsW
8HwpOIxzXQ1a14/0DYUaaMvLADAEAmSQzE1Ll7nw488XvF+wdUfd4yTV/SoPyS4rCjAYr3D+joiy06+NSz
8kRC1ecv17RF85RfXBR2NGDS9bQf1sHmDerac0Clc2dqZtPZKq6eEXYsZKh4X7+O7Nijg+s3SJJmNp2ligV1
yisqDDkZMFK8f0CdO/fqwJO/Z98OhKDv0FG1PvOcjm7fraKaGZp90bkqmVUddqycRzMSAIbpPtiuXb94d
Gh+/29+J4tGVH320hBTAYO697dqzwO/GZrf92izogX5mrF0QYipgMk30NWjXT//tfqPHpMkHd2+Rz0HO7
TwLVcrv6wk5HTIRMdaDqjlV08Mzbc89KSiBfmatnBeiKmAVN37W7X7/seH5vc92qxofp5mLGsMMRUwN
cT7+tXyyHp17T0gSerac0A7Dj6kRW+7RoXTK0JOl9s4TRsAhulqOZAy1rFhi2J9/SGkAUY6un1Pylj7H15QIh
4PIQ0QnP6jnUONyOMGjnWr74Qx4LhDm3ekjHU8ty2EJMDJHd0x2r59ixIx9u3AZOvv7BpqRB6X6B9Q3+
HOkBJNHaE0I81spZltNrOtZnbrSZZ7q5m5mTUl5xvMrMfMnklOXw8uNYCpIG+UU2LySotlUb67QfjyRjkCL
L+8VGYWQhogOJG80U/miY4xDhSUl44yVhZCEuDk8krH2LdH2LcDky2SFx31c14kn/cXky3wT9dmFpV0l6
TXSVou6e1mtnyU5colvV/Skyc8tM3dz0tO75v0wACmlNK5s0Y2JCOmmU1n8YEXGaGiYa4ihflD8xaNqPqc
pbIIzXLktoLpFao6e8mIsRlnLlLB9PKQEiHTTV/SMOLDpOVFOe0VGWnUffu57NuBIBRUlGnWinNGjJXNn6
OiymkhJZo6wvh0vULSVnffLklmtlrSdZI2nbDcJyXdKenmYOMBmMqKKqdpwZuuVM+BDiViAyqeWcUNEp
AxiqtnaOGbX6vuA+3yRIL6xJQRzc9TTdNZKp83R32Hj6pgermKayoVLch/+ZUxJZXMrFLjW65Wz4E2SeL1E
hlrcN9+tboPtMkTCZXMrFIRtQoEwiIRVS5fpKKaGeprP6L88lKVzKwa9Ww5pNeEm5FmViPpryU1DN+eu//
vMVaZK2n3sPk9ki46YZsXSKp395+Z2YnNyAVm9jtJRyV9zN0f1SjM7L2S3itJ8+ZxoWpkHmo0cxXNmKaiGX
wbJlGnmaiocrqKKqeHHSOjUKdTQ35xkfLnz1H5/DlhRzlt1Gg4iqumq7iK18tTRZ2Gp6hyGkdinSLqFOkWLS
xQeV2tyutqw44ypaTj2O8fS5om6QFJPxs2jYuZRSR9QdJNozy8T9I8dz9f0gcl3Wtmo97iyN3vdvcmd2+qqa
kZbxxg0lCjyAbUKbIBdYpMR40iG1CnyAbUKZAb0nGadom733Iay7dIqh82X5ccO65c0lmSHk5ekH+2pDV
mdq27N0vqkyR3f9rMtklaIql5AvkBAAAAAAAABCAdR0b+1Mz++DSWXy9psZktMLMCSddLWnP8QXc/4u
7V7t7g7g2SnpB0rbs3m1lN8gY4MrNGSYslbU/DcwAAAAAAAAAwycZ9ZKSZdUpySSbpI2bWJ2kgOe/uPtb
p0zEzWyVpnaSopHvcfaOZ3SGp2d3XjLZe0uWS7jCzAUkJSe9z947xPgcAGEv7gUOKx+OqmjlD0bxo2HGAE
Xp7+nSk/YiKS4tVMYO7CSN3xGIxdRw8pLy8PFXO5AYOyBztBzqUiCdUNatSkSh3Ocbk6+3p1ZH2o+zroUQ
iofYDh2QmVc2qVPIMUiCrjbsZ6e7jfkV097WS1p4wdtsYy14x7Of7JN033t8LAC+n51iPnnhgvVbf9QP1dvf
pqrdeode94ypVz64KOxogSWrZsVff+ep9euaxDZo5p1rvueWdOmvFGYpE+HCM7Na2v11r/+t+PfiDR1Rc
UqTrV71VF722ScUl3NES4enq7NZv1j2p//7XH6m/b0Arr79SV//pa2iWY1Lt2daie//l+3r2txs1q65Gf3HLn+
vMVyyjCTUFHW47ogd/8Ih++u11ikYjevNfvVGXv/4SlU8vCzsaMCET/uRiZg+eyhgAZIOtG3fom5/5trqOdis
ei2vddx/Ub9Y9FXYsQJLU09Wr//jcd/TMYxskSQf3tunzN31Ve7bvDTkZMHGPrX1Cv/zerxSPxXXsaJf+/R//
U9v+wNV4EK4Xnt2q//jcd9R9rEexgZh++q11Wv/Q02HHQg7r6uzWN//p23r2txslSQf2tOqfP/gvatmxL+Rk
CMMzv9mgH37zpxroG1Bvd5++85Xv67n/2Rx2LGDCxt2MNLMiM6uSVG1mM8ysMjk1SJqbroAAEKTRdu
6P/ORxHTvaFUIaYKSOgx3a9PTIGo3H4tq360BIiYD06DxyTI/85PGU8c2/3xpCGuAlG5INoeEeXvO4ert7Q0i
DqaDj4CFteXbbiLHYQEz7du0PKRHCEo/HR903rn/of0JIA6TXRI6M/BsN3sV6maT/kfR0cvqxpK9OPBoABK
+mtjplbM782SosLAghDTBSUXGRyipKU8bLyktCSAOkT2FRgWrnz0oZr55dGUIa4CWz6lPrsq5xjvIKxn21K+
CkikoKVVJWnDI+2v4fuS0ajWr+4rqU8bmNc0JIA6TXuJuR7v5ld18g6UPuvmDYdK6704wEkJXOuGCJZs+b
OTRfWFSga9/zOuUX5oeYChhUNbtS77r57SPGVrzmAtUvSn2jCmSTgsICvfkv36CCYV/8zJk/W0vPWxJiKkA
6+6IzVF37UlO8qKRQK99+lfLyaEZictTUVutdN10/YuySa1aofiH7+qnoiuteqZJhXzpPr56mpsvPCzERkB7p2I
u2mNlbThg7ImmDux9Mw/YBIDCz583SLV/+O+3aslsD/THNbZyj+oVceQKZ4xVXnK/b77lV+3cdVMX0cs1f
Ws9dNpETFp+9UJ+451bt2b5XBYUFmrekbtSj1YEgzWmo1Ufuukm7tuxRbCCmuoVzVcdRSZhkK668ULPr
Z2n/noOaNqNc85fUq2waR0ZORQ1L5+n2f79Fu7a2KBKJaN7iOs2un/nyKwIZLh3NyL+UdLGkh5LzV2jwd
O0FZnaHu38rDb8DAAJTM6daNXP4AIzMlF+Qr0VnNmrRmY1hRwHSrn5RHUf6IuPMnFujmXNrwo6BKaS
gsECLzm7UorPZ12PwS5E5DbVhxwDSKh3NyHxJZ7j7AUkys1mS/lPSRZJ+LYlmJAAAAAAAAIAJ3cDmuLrjjci
kg5Lq3b1D0kAatg8AAAAAAAAgB6TjyMiHzeynkv47Of/W5FippMNp2D4AAAAAACAHJCOZuQNGmxAX
pqc/09J97m7S3p1GrYPAAAAAAAAIAdMuBmZbDp+PzkBAAAAAAAAwKgmfM1IM3uLmW0xsyNmdtDMHjOz
Os3saDrCAQAAAAAAMgd6ThN+7OS3ujuz6VhWwAAAAAAAByVDrupn2ARiQAAAAAACAl5OOIyOb
zey7kn4kqe/4oLv/IA3bBgAAAAAAAJAj0tGMrJDULenqYWMuiWYkAAAAAAAAgCHpuJv2X6QjCAAAAAAA
AAIDclo67aS8xswfN7/J+XPM7GMTjwYAAAAAAAgl6TjbfkPRsfN7/J+XPM7GMTjwYAAAAAAAkEPS

0YwscfenThiLpWG7AAAAAAAAAHJIOpqRbWa2UIM3rZGZvU3SvjRsFwAAAAAAAEAOScfdtG+QdLekZW
bWImmHpHemYbsAAAAAAAAAcsiEj4x09+3ufpWkGknL3P0ySW+ecDIAAAAAAAAAOSUdp2lLkty9y907k
7MfTNd2AQAAAAAAAOSGtDUjT2CTtF0AAAAAAAAAWWqympE+SdsFAAAAAAAAkKXGfQMbM+vU6E1
Hk1Q87kQAAAAAAAAActK4j4x093J3rxhlKnf3kzY5zWylmW02s61mdutJlnurmbmZNQ0b+3Byvc1mds14
8wMAAAAAAAI1riPjBwvM4tKukvSayXtkbTezNa4+6YTliuX9H5JTw4bWy7peklnSpoj6QEzW+Lu8aDyA
wAAAAAAABifybpm5MmskLTV3be7e7+k1ZKuG2W5T0q6U1LvsLHrJK129z533yFpa3J7AAAAAAAAADJc
GM3IuZJ2D5vfkxwbYmYXSKp395+d7roAAAAAAAAAMlMYzciTMrOIpC9IummC23mvmTWbWXNra2t6w
gFpRI0iG1CnyAbUKTIdNYpsQJ0iG1CnQG4IoxnZIql+2Hxdcuy4cklnSXrYzF6U9EeS1iRvYvNy6w5x97vdvcn
dm2pqatIYH0gPahTZgDpFNqBOkemoUWQD6hTZgDoFckMYzcj1khab2QIzK9DgDWnWHH/Q3Y+4e7W7
N7h7g6QnJF3r7s3J5a43s0IzWyBpsaSngn8KAAAAAAAAAE5X4HfTdveYma2StE5SVNI97r7RzO6Q1Ozua0
6y7kYz+56kTZJikm7gTtoAAAAAAABAdgi8GSlJ7r5W0toTxm4bY9krTpj/tKRPT1o4AAAAAAAAAJMi425gA
wAAAAAAACA30YwEAAAAAAAAEAiakQAAAAAAAAACQTMSAAAAAAAAQCBoRgIAAAAAAAAIBM1IAAA
AAAAAIGgGQkAAAAAAAAgEDQjAQAAAAAAAASCZiQAAAAAAACAQNCMBAAAAAAAABAImpEAAAAA
AAAAkEzEgAAAAAAAEAgaEYCAAAAAAAACATNSAAAAAAAAACBoBkJAAAAAAAAIBA0IwEAAAAAAAE
gmYkAAAAAAAAgEDQjAQAAAAAAAQCJqRAAAAAAAAAAJBMxIAAAAAAABAIGhGAgAAAAAAAgEzUg
AAAAAAAAgaAZCQAAAAAACAQNCMBAAAAAAABIJmJAAAAAAAAIBA0IwEAAAAAAAEAiakQAAAA
AAAACEUoz0sxWmtlmM9tqZreO8vj7zGyDmT1jZo+Z2fLkeIOZ9STHnzGzrwefHgAAAAAAMB45AX9C8
0sKukuSa+VtEfSejNb4+6bhi12r7t/Pbn8tZK+IGll8rFt7n5ekJmBTNV/tFN9bR2KxwZUVFmpwsrpsggHPCN
8A13d6us4pFhXlwqmT1dh5XRFCwrCjgWMaqCrW33tHYp1dyfrdYaiBflhxwJOqu/QYfW2d0iSiqoqVThjes
iJgFSeSKiv47D6OjoUyctXYXWlCirKw46FHJWIxdR36LD62g8pWlSooqpK5ZeXhR0LwCgCb0ZKWiFpq7tvly
QzWy3pOklDzUh3Pzps+VJJHmhCIAv0H+3UvocfU7y3b3DApNmvvFgls2eFGwxTXqynV61PPa3e1vahscp
zz9S0JYtkZiEmA1LFenp18Ilm9SWbOpJUdf7ZqljUSL0iY/W2H9K+hx+Tx+OSJItGVXvFZSqqmhFyMmCkno
Nt2v/ob4Y+zUWLClX7qktVMK0i3GDISd37Dujgb9cPzeeVlar28kuUX1YaYioAownjEKq5knYPm9+THBvBz
G4ws22SPivpxmEPLTCz35nZI2b2ysmNCmSu3rb2lxqRkuRSxx+eV3xgILxQgKT+I0dHNCIl6dAfnlfsWFdIiYC
x9R8+MqIRKUkdG55TrLs7pETAyzv24q6hRqQkeTyuzp27QkwEpIoPDOjQxudGHFYS7+1Tb1v72CsB4xTr7
VPH7zeOHDvWpb5Dh0NKBOBkMvZ8Tne/y90XSrpF0seSw/skzXP38yV9UNK9Zjbq12pm9l4zazaz5tbW1
mBCA6dhojWa6E9tOib6+uSJRDriAZLGV6fDPyAPH0tQm5gkE3k9TYxWr7GYPE69In3S/b401pPaLI/TQMc
Epf3zU8JHfnGeFB/lPSxwqsas00RC8f7+lOU9lrqfBxC+MJqRLZLqh83XJcfGslrSmyTJ3fvcvT3589OStklaMtp
K7n63uze5e1NNTU1aggPpNNEaLaquTBmrWNyovMLCdMQDJI2vTvMrymV5I68CUlw7W/klJZMREZjQ6
2lBRZksLzpirLRujvJKqVekT7rfl5YvaEgZKxtlDDgd6a7TaGGBpi1uTBkf7T0scKrGqtNocZEqFi0YubCZ8qdxjVI
gE4Vxzcj1khab2QINNiGvl/SO4QuY2WJ335Kcfb2kLcnxGkkd7h43s0ZJiyVtDyw5kEEKZ8zQ7Ff+kTo2PKd4
f7+mLV6osvq6sGMBKigvU+2rLtGhjc+r//ARldbPVcWiRkXyw9jlACdXUFGh2ssvHazXI0dUNq9OFQsXKBK
NvvzKQEiKaqpVs+JCHd70vFzSjOVLVVxTHXYsIEVpfZ3cpSNbtilaUKDKs89QUSXXNkX6mdnQ/vvo9heVV1
KsyrOWc3MvIEMF/snQ3WNmtkrSOklRSfe4+0Yzu0NSs7uvkbTKzK6SNCDpkKR3J1e/XNIdZjYgKSHpfe7ek
fpbgNxn0YhKamersKpKnkgor4gjIpE5iqoqNeuSFUrEYooWFMoi3AgEmauoulKzLk3Wa2EhN65BxosW5K
u8oV4ltYM3rYsWFoScCBhdXnGRpi9dpLL59bJIRNGC/LAjIYfll5ZoxpnLVL6wQRaNKppPvQGZKpTDVNx9ra
S1J4zdNuzn94+x3n2S7pvcdEB24U0dMlUkL0+RPI6GRHagXpGNaEIiW/ClOYKUV1QUdgQALyNjb2ADAA
AAAAAAILfQjAQAAAAAAAAQCJqRAAAAAAAAAAAJBMxIAAAAAAABAIGhGAgAAAAAAAgEzUgAAAAAAA
AAgcgLOwCAsSXiMXksJovmKZLHnysyU7y/X/KEIvkFsgjfcSHzeCKhxEC/ZBFFCwrCjgOMKhGLyePs85HZ4v
19krsiBQUyY5+PzDO0z49EFM1nnw9kKt7pABkq1t2lrr27FO/uUqSwSKV185VfWh52LGCIJ+LqP3JY3Xt3y
+MxFUyvUvGsWkULi8KOBgyJ9/Wpp3Wf+jvaZNGoimvrVDBthiJR3gIhcwx0HVN3y07Fe3sULS5R6dz5yis
pDTsWMCQRj6v/cLt69rfI4wkVVlWrqGa2ogWFYUcDhsT7etVzoEX9hw/J8vJUMmeeCiqm82U5kIH4qwQ
yUGJgQMd2bVO8u2twvq9Xx3ZsVbyvN+RkwEti3d3q2r1DHo9JkvoPt6u37YDcPeRkwCB3V19Hq/o72gbn
43F179mpeHd3yMmAl8T7+nTsxa2K9/YMzvd0q/PFrYNHnQMZItZ9TN0tu+TxuCRXX3ur+g+1hx0LGOKJh
Hpa96v/8KHB+VhMXbu2K9bDPh/lRDQjgQwU7+9T4oQPIZ6ID54aA2SI4x+ch+s/3KHEwEAIaYBUHoup73
Dqh+VYT1cIaYDRJQb6hr7UOc5jA0qwz0cGiR3rTBnrO9SuRCw2ytJA8BKxAfUf6kgZ52AOIDPRjAQykEWjkl
nKOKcVIpOMdk2zSEGhLMquBZnBIpFRTyGMcA0pZBAbY99u0WjASYCxRQpHeS0tLJJFUt+vAmGwSFSRU
a4LHeG1FMhIfGIEMlC0sEjFs+tGjBVWzxz1jSAQlmhJqaLFJS8NmKmkto6mOTKGRaMqnj13xJc7kaJirsWHj
BItLFTRzNoRY8Wz5nD9XWSU/NJyRQqG1aRFVDyzVhah0YPMEMnLU+mcekkv7fOjJWWKFrPPBzIRnxiBD
GRmKqqsVl5JqRL9fYrk5StaXEKTBxklWlCosvmLFO/tlsfjihYVK1pUHHYsYIT80nJVLDpD8b5emUUULS7mh
gvIKBaJqqhmlvLLypUYGFAkv0DR4hJuuICMEi0sUnnjYsV7uuXuihYVK499PjJMXlmFKhYtG9znR6OKFpdw
R20gQ9HZADKURaPKLy2TSsvCjgKMKVpQoOgop8QAmSSvuER5w4/iBTJMJJqnSFlF2DGAk4oWFPJlDjKa
mSmvpJQzIlAswFeuAAAAAAAAAAJBM7SbPmAAACAASURBVBIAAAAAAABAIGhGAgAAAAAAAiEuXvY
GSadmbVK2pnmzVZLakvzNicik/JM9Sxt7r7ydFY4oUYz6d/v5ZB1ckx21tOuUemkr6XZ9G+bDjzfYKS7Tk9V
tvz/zZacUvZkHU/Oie7z0ymT/p3JkiqbX0sz5d/wdGRjZmnq5g5rn38qMun/CVnGFkSecdUpRjclmpGTwcy
a3b0p7BzHZVIeskxMNmUm6+TIpqxS9uWdKJ5vbsuW55stOaXsyZotOceSSfnJkrk5xiMbs2djZoncmSiTnh
tZxpZpefDyOE0bAAAAAAAAQCBoRgIAAAAAAAAIBM3I8bs77AAnyKQ8ZJmYbMpM1smRTVml7Ms7UTz

f3JYtzzdbckrZkzVbco4lk/KTJVWm5BiPbMyejZklcmeiTHpuZBlbpuXBy+CakQAAAAAAAAACwZGRAAAAA
AAAAAJBMxIAAAAAAABAIGhGAgAAAAAAAAgEzUgAAAAAAAAAgaAZCQAAAAAAACAQNCMBAAAAAAA
ABGJKNCNXrlzpkpiYgppOGzXKFPA0LtQpU8DTuFCnTAFPp40aZQp4GhfqlCngaVyoU6aAJ6TRlGhGtrW1h
R0BOClqFNmAOkU2oE6R6ahRZAPqFNmAOgWy15RoRgIAAAAAAAAIH81IAAAAAAAAAIHICzsAkE0OHzq
ilt37VFxSrHkNc5WXx58QAJyu3p5e7XqxRYlEQvMa5qqktCTsSECK9rZD2tdyQGXlpZrXMFeRCN/hI7MkEg
nt3rlXR490qnbuLFXXVIYdCUjR1dWt3TtbFLGI6hvmqri4KOxlgYnFYtr1Yot6uns0t65W0yunhR0JyBh0UoB
TtGXzdt1646e05fltyi/l16qb/lJ/8ufXqqysNOxoAJA1Duxr1de+eI9+9L2fy9316qsv080fX6W6ebVhRwOGb
Nrwgm6+4Xbt3tmioqJC3XzbKr3hLVdPqQ/RyGx9ff362Y/u1z/d9mX19vaprr5Wn/vaJ3TmOUvDjgYMad
m9T5//9L/qgZ8/Ikm69q3XaNWH/kqz58wMOdnkO9Z5TN/7rzX66j9/U7GBmJacsVCf+fLHtHhpY9jRgIzA
V7zAKejp6dVX7vyGtjy/TZI00D+gL37m69q04YWQkwFAdnny8af1w++ulfvgTQkf+uVjuv/nD4cbChjm6JFO
3fGRf9bunS2SpN7ePn3yI5/Xlue3h5wMeMmW57fp9r//rHp7+yRJe3bv0+233Kkjh4+GnAx4yUO/fGyoESl
Ja+5bp98+uj7ERMHZtGGLvvSZf1NsICZJeuG5bbrr899Ub09vyMmAzEAzEjgFhzqO6PFfP5Uy3rJrbwhpAC
B7Pf7r1A8hD6x9RAP9AyGkAVJ1tB3Spmc3p4y37N4XQhpgdC2796eMbd60Te2tHSGkAVLF43Hdv/aRlPF
HHvxtCGmCt2d36ufERx96Uoc6joSQBsg8NCOBU1BeXqblZ6ee9jJzVnUIaQAge5134ZkpYysuuUD5Bfkhp
AFSVUwvV/38uSnjNTOrQkgDjG60eqydO0sV0ytCSAOkikajWnHpBSnjF644J4Q0wZs5yt/oWeeeofJpZSGk
ATIPzUjgFJRXlOrmj9+g8oqXdh5v+pPXadlZS0JMBQDZ57IrLtLZ550xNN/QWK83vuWaEBMBI1VWzdA//N
PNKi4pHhp791//mZacsTDEVMBIS85o1F/+7TuG5ouLi/SJz97CTWyQUf74uqu0cHHD0Pzyc5bqVVddEl6g
AC0/e6mufdvKofmKaeX60Ef/D/cbAJLs+DWbcllTU5M3NzeHHQM5YPfOvdq5Y7fKy8vUuGS+ystH/WbLT
ne71CgCdto1KlGnSJ+OtkPatuVFxeMJNS6eP9ZR5tQpQvXi9t3as7NF02dMU+Pi+WPd9Z19PkLT3d2j7Vt2
6nDHYdXNm6P5jfUySylJXksRqtYD7dq+9UVZJKKFi+aravSGeU7WaefRY9q25UUd6+zS/AV1ox51j6wyrjrF
6LibNnAa6ufPUf38OWHHAICsVlk9Q5XVM8KOAZxUQ2O9Ghrrw44BjKmkpFhnnbss7BjASdXMqlLNrKl5
mYvyijKdd+FZYccAMhKnaQMAAAAAAAAIBM1IAAAAAAAAAIGgGQkAAAAAAAAgEDQjAQAAAAAAAASC
ZiQAAAAAAACAQNCMBAAAAAAAABAImpEAAAAAAAAAAkEzEgAAAAAAAEAgaEYCAAAAAAAACEQozU
gzW2lmm81sq5ndepLl3mpmbmZNw8Y+nFxvs5ldE0xiAAAAAAAAABOVF/QvNLOopLskvVbSHknrzWyN
u286YblySe+X9OSwseWSrpd0pqQ5kh4wsyXuHg8qPwAAAAAAIDxCePIyBWStrr7dnfvl7Ra0nWjLPdJSX
dK6h02dp2k1e7e5+47JG1Nbg8AAAAAAABAhgujGTlX0u5h83uSY0PM7AJJ9e7+s9NdFwAAAAAAEBmy
rgb2JhZRNIXJN00we2818yazay5tbU1PeGANKJGkQ2oU2QD6hSZjhpFNqBOkQ2oUyA3hNGMbJFUP2y+L
jl2XLmksyQ9bGYvSvojSWuSN7F5uXWHuPvd7t7k7k01NTVpjA+kBzWKbECdIhtQp8h01CiyAXWKbECdAr
khjGbkekmLzWyBmRVo8IY0a44/6O5H3L3a3RvcvUHSE5Kudffm5HLXm1mhmS2QtFjSU8E/BQAAAAAA
AACnK/C7abt7zMxWSVonKSrpHnffaGZ3SGp29zUnWXejmX1P0iZJMUk3cCdtAAAAAAAAIDsE3oyUJHdf
K2ntCWO3jbHsFSfMf1rSpyctHAAAAAAAAIBJkXE3sAEAAAAAAACQm2hGAgAAAAAAAgEzUgAAAAAAA
AAgaAZCQAAAAAAACAQNCMBAAAAAAAABIJmJAAAAAAAAAIBA0IwEAAAAAAAAEAiakQAAAAAAAAAC
QTMSAAAAAAAAQCBoRgIAAAAAAAAIBM1IAAAAAAAAAIGgGQkAAAAAAAAgEDQjAQAAAAAAAASCZiQ
AAAAAAACAQNCMBAAAAAAAABAImpEAAAAAAAAAAkEzEgAAAAAAAEAgaEYCAAAAAAAACATNSAAA
AAAAAACBoBkJAAAAAAAAIBA0IwEAAAAAAAAEgmYkAAAAAAAAgEDQjAQAAAAAAAAQiLywAyB7DAw
MaOuGHXrqV0+roKhAK159gRqXN8jMUpc91q1jew7o2J59KpldrbL6WhVOKw8hNQDkDndX2679euHZb
Xp2/fOat7he57/yHM1pqA07GjBhfb192rJhu5568GmVTy9T0xXna8Gy+UOP93d26die/epqOaDSOTNVVl
ergorSEBMjk3kioe6D7TqydZckadrCeSqZVSWLnN6xGO6u7c/tVPNDT6unq1crrmzS4rMalV+YPxmxMQW
5u3oOtuvI9t1KDMQ0beE8xQoL9fzvtuiZ32xQw9J5OveSs1U7b1bYURGC2EBMWzfu0JMPNCu/IE8rXnOh
Gpc3KHKar2UY20BXj461HNCxXXtVPLNS5fPmqnA6vYvJRjMSp2zz77bozhu/LHeXJK1b/aA+/m8f0sIzG0cs
F4/FdOCpZ3Xo+e2SpMMvvKji2dVqWHm58kqKAs8NALmiu7VDD/7oUf303gckSY+ve0q/+tGj+vBdH1D1
7KqQ0wETs+HJ5/Slv//a0PwvVj+oj999sxqWzFO8r197H2tW544WSYPvLcrmz1H9VRcrr7AwrMjIYN3727T
9xw9Kyfet7Rte0ILrrlTZnJmntZ0dz72oT/3N5zTQH5MkPXDfI7r5Szfq3IvPSntmTE09B9u1/YcPyBMJSVJny
wH9rq1XP/v2LyVJj619Qr/64a916798QJUzZ4QZFSF44fdb9ZlVXxz2GfxX+ti/fUiLz14YcrLcklJH1fq7TWp/d
rOkwfcXh6q2q+ENVyi/tCTkdLmNdjpOSSwW08/+65dDL4LS4Lc0zY/8PmXZ/sOdQ43I43r2t6n30JFJzwkA
uezg7oNa9/2HR4wd2HNQu7e2hBMlSJOerh798Js/GTHW19On559+YfDnw51Djcjjju3cq/5DnYFlRHbp2L
x9qBEpSXJXx6Ytp72dZx7/w1Aj8riffWud+vv7JxoRkCQd3b5nqBEpSYmqKv1i9YMjltn74n729VNQIpHQuu
89NOIzeDwe1xP3N4eYKrf0Hz2m9g0vjBjrbT+s3g56F5ONZiROiSekgd6BlPGB/tSx4S+WpzIOADg1nnDF44
mU8UQ8HkIaIH0SCU9p+EiDX4ZKkntq3Q+O894Co/OB1NdFHxi9jk5mYCD1vW5/X790+psCRjXaPjyRGGV
fP8oYcpwnX29OMNoYxinhI7+4SvIE7y8mG81InJL8gjy97h1XjRgzM73iivNTli2cVq7y+XNGjBVMK1fR9IpJz
QgAua6mrkaXr7xoxFjFjHLVLZwbUiIgPUrLS3Ttu1aOGItGozrjgqWSBt9bFM8aeSmC4ppKrumEMc04ozFlr
PLMRae9nfMvPUcWGXl99Ne/8xoVFBWMOxsw3LTG+hHz0cNHdPkfXzxibHr1NNU1jvx8hdwXiUZ0zZ++Z
sSYmemSa1aElCj35E8r07TF80eM5ZUWq6iS3sVk45qROGVnvuIMfeBzN2jd6gdUVFKka66/UgvPXJCyXLQ
gX7WXXaiS2hod3b5bpXNnacbSRuWXcc0FAJiI0pmVesM7rtKc+bP0xMPPqHHZfF3xpldqVt3pXQMNyETn
v/Ic/d9/fK9++b1fqaKyQiv/7EotOGPwA0JecZHqr7xYh7fsVOfOFpXPm6NpSxqUV8y1qDG60toaNbzh1Wp
79nnJXdXnLlNpbc1pb6fxzAZ95K4P6herH1TPsW5d/WdX6symZZOQGFNV8awqLbj2NWp7drMSAzFVnb
NUb7r0Qs1bUqfHf/GUFp/dqFdde5lq5lSHHRUhWHbBEn3oC6v089UPKj8/Tyuvv0qLzk79sgXjE83L0+yLzl

VxTaWObN2pktk1mnHGQhWUl4UdLefZRE5vMbOopDvd/UPpi5R+TU1N3tzMdRXSJR4bPJUgmhd92W
UT8bgi0ZdfLsek3l78ZVCjCNhp16hEnWYSTyQ00D+g/MICmY3rf2c2oE6nqNhATJFIRJHo6CfwZNh7C/b5G
c6Tl7awMerpVJ3O+98Mw2tplvBEQu4+4vVtoH9Aefl5ubyvP446fRnxeFzyrHwNyhqJeFwWiZzs7y3n/xCD
NKEjI909bmaXpSsMssPpvABm0IcFAMgZFomooIg7CCM35eWf/O0p7y1wOibahDyOBgAmm0UiKZ2O/IL
8ULIg80TZ90063l8EKx2naf/OzNZI+m9JXccH3f0Hadg2AAAAAAAAgByRjmZkkaR2ScOvrOqSaEYCAAAAA
AAAGDLhZqS7/0U6ggAAAAAAAADIbRO+iIqZLTGzB83sD8n5c8zsYxOPBgAAAAAAACCXpOOKzt+Q9GFJA
5Lk7s9Kuv5kK5jZSjPbbGZbzezWUR5/n5ltMLNnzOwxM1ueHG8ws57k+DNm9vU05AcAAAAAAAAAQgHR
cM7LE3Z864fbnsbEWNrOopLskvVbSHknrzWyNu28atti97v715PLXSvqCpJXJx7a5+3lpyA0AAAAAAAAAgQ
Ok4MrLNzBZq8KY1MrO3Sdp3kuVXSNrq7tvdvV/SaknXDV/A3Y8Omy09vm0AAAAAAAAA2SsdR0beIOlu
ScvMrEXSDknvPMnycyXtHja/R9JFJy5kZjdI+qCkAo28U/cCM/udpPubKOSPubuj04sPgAAAAAAAIAgpOPISHf3
qyTVSFrm7pelY7vufpe7L5R0i6TjTjN8TZJ2meu5+vwUblvWZWMdr6ZvZeM2s2s+bW1taJxgHSjhpFNqBOk
Q2oU2Q6ahTZgDpFNqBOgdyQjmbkfZLk7l3u3pkc+/5Jlm+RVD9svi45NpbVkt6U/B197t6e/PlpSdskLRltJX
e/292b3L2ppqbmlJ4IECRqFNmAOkU2oE6R6ahRZAPqFNmAOgVyw7hP0zazZZLOlDNzN4y7KEKSUUnW
XW9pMVmtkCDTcjrJb3jhG0vdvdvctydnXS9qSHK+R1OHucTNrlLRY0vbxPgcqAAAAAAAAAAwZnINSOXSnqDp
OmS3jhsvFPSX4+1krsPmtmNkh6WlJV0j7tvNLM7JJ3lzuZnaHpGZGZ3vbzLZpF706ufrmkO8xsQKFJC0vvvcWM
CzwEAAAAAAAAABAQMbdjHT37H3H0v6s6e8/Pc1110pae8LYbcN+fv8Y692n5GnhAAAAAAAAAAALJLOq4Z2W
5mD5rZHyTJzM4xs4+93EoAAAAAAAAAApZ0NCO/IenDG/9xzEoAAAAAAAAAAQ9LRjCxx96dOG
IulYbsAAAAAAAAAAckg6mpFtZrZQkuSmb1N0r40bBcAAAAAAAAAAAAAAABADpnI3bSPu0HS3S2ZWK
WmVmVmLpB2S/jwNcwPAAAAAAAAAAAAAAHJQOpqRRe7+7+wTRsBwAAAAAAAAAAAAAAOS2iZymDQ
AAAAAAAAAA+vcAAAAAAAAAAAOSodJymvVVSdxq2AwAAAAAAAAACCHpePIyC5Jz5jZQ5L6j6g+6+41p2DYAAAAAAAAACAHJGOZuSPk
hMAAAAAAAAAAjGnCzUh3/490BAEAAAAAAAAACQ2ybcjDSzxZI+I2m5pKLj4+7O3bQBAAAAAAAAAADEnHDW
z+P0n/Kikm6dWS/lPSt9OwXQAAAAAAAAAAAAAAA5JB3NyGJ3f1f3CSuftOd79d0uvTsFwAAAAAAAAAAAAAAAAOSQdN7Dp
M7OIpC1mtSiSyNGwXAAAAAAAAAAAAA5Jx5GR75dUIulGSR3K+l+S3p2DYAAAAAAAAAAAAAAAADIIem4m/b65I/H
JP3FRLcHAAAAAAAAAIDeNuxlpZl9y978zs59I8hMfd/drJ5QMAAAAAAAAAAAAAQE6ZyJGR30r+95/TEQQAAAAAAA
ABAbht3M9Ldn07+9xEzq0n+3JquYAAAAAAAAAAAAAByy4RuYGNmt5tZm6m6TNkl4ws1Yzuy090QAAAAAAAAAAAD
kknE3I83sg5IulfQKd6909xmSLpLJDAAAAAAAAAAAAAAOSGiRwZ+b8kvd3ddxwfcPftKv5c0rsmgGgwAAA
AAAAABAbplIMzLf3dtOHExAAAAAAAAAAAAkIMm0ozsH+djAAAAAAAAAAAAAAKagcd9NW9K5ZnZ0lHGTV
DSB7QIAAAAAAAADIQeNuRrp7NJ1BAAAAAAAAAAAAAOS2iZymDQAAAAAAAAAAACnjGYkAAAAAAAAAAAgEDQjAQAA
AAAAAAQCJqRAAAAAAAAAAAAAIRSjPSzFaa2WYz22pmt47y+PvMblOZPWNmj5n8Z8mGPfTi53mYzuybY5AA
AAAAAAADGK/BmpJlFJd0l6XWSlkt6+/BmX/BmY9K97n62u5+n56tn58n6bOSvpBcd7mk6yWdmXzOcWyKWmlpK8ltwcAAAAAAAA
AAAAAAAAAA5xZOQKSVvdfubu790taLen64Qu4+9FhsyVKXF9uyS81M7NqS8S0LQksn2YrVy90QbtcHB5Sfn8Wd5nLRN1H63yGhsj7R5xePPHnzdJZWwU3
Agw4VxZOQKSVvdfbu790taLem64Qu4+9Fhs6WSPPnzdZJWu3ufu++QtDW5PQAAAAAAAAAAAAAAAAAAAAZLoxm5FxJ
u4fN70mOjWBmN5jZNg0sjZNg0eGXnj6aybXP+9ZtZsZs2tra1pCQ6kEzWKbECdIhtQp8h01CiyAXWKbECdArkhY
29g4+53uftCSbdI+tg41r/b3ZvcvammpuYUngEQJGoUmY86RTagTpEfqDdUxadzGIbCOHIYqW4ZAhjp9ZnHAaNINNmqLZDa04tZXOMRjmKOTX3wGkwxdQAoTTSwXpSjOOUBx
OTaW1ZLeNM51AQAAAAAAAGSIMJqR6yUtNrMFZMFZlagwRvSrBm+gJktHjb7ekklbkj+vXkX42jRWRWa2QJJ5
FUBmAAAAAAAAAAAAAAABOUF/QvdPeYma2StE6fiO6rJyROzaYStMrOrJA1IOJA1IOiTp3tklbmNMsZi1z5N1sZsD2VyO
O7//s3Xl4XHd97/HPd97/HPd1btu2zJmywbhV/7qvq2uOzJsmR8vz7/4EdVmy3n0XDsyytqnd9ZN9Ro8XKiUhb
b0B0gvXtXC5hTUvIQkXtsFdd13Ng5GpbZiSkPEzF0TzYtSt8/Q2pSURmAzTqs1aleNNsAJKUQlzaSXstsSUrsasK+eZW5kGpAa5SnNNN
AAAAAAAB2C1SfXsAAAAJAAAAAAAAAAA8iGwN7ABAAAAAAAMLvQjAQAAAA
AAAAAAAAAABBqAAAAAAAAAAAAAAAAA
AAAAAAQCjqRAAAAAAAAAAAAAAAAADkQAAAAAAACjYkAAAAAAAAAAAAAAAAAACeiPkdIGwGT
AAAAAAAAOAJmpAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACeiPkdIGwGT
3VpoOOEXDqjRGW5kpUVMjO/YwFAoKR6+zTQcUKpvn7Fy0qVrKpQNB73OxYwqaGRek339StRXqdGZaU
icd4iIdgGTnZq4MRJSVKyskJJqkL/FmvpzFsIunVbLSyXDbvgiIJN1KQUEcxHZXBkbVCyaCLvEYYCGw
icd4iIdgGTnZq4MRJSVKyskLJinKfEwHZXMZp4ORJDZ7olMWiSlZVKFFa6ncszFIunVb/iZMaPHlK0URcyapK
xUuK/Y4FYBK8056Bwc5TOvrAr5Ue5GBgeiJjqX3qlCmur/Q0GAAGS6u9Xa/MT6j/iPk5k0IKqFQvkA+I
6qr19tjzarv619dKz6kotUvrzRx1TAmQ10nNSRBx6US6UkSRaLacmt/MT6j/WOjpWvXG9ylYs48Q
Wqf+kVSpTRkEtu9R5r2v5uvHx2dj5eWqu4l6L6lhCQQq2p2PQF9L2+akZZmCyY6bR0ZQ0AgzVkTl7L1sKZm
LaOMeJlpbJYdNxYE+Vj7OD0Fz7c5ORLdZQcA+OrOaEPtzC+yuSbG1nmVpOXf8HPBVRIwq4xkpl
iWpY9sOpXp6fEoETG2ws3Nc1KSOp7arqGeXp8SAWfxtf/AaCNSklwqpa79B31MGTLDKXUsX3naCNSkt
J9/eo/3n6YoxBkzeSGbksoYvNNjMqi6gwu3l5ZY25VFgzZNH8rE
TyZoVTWmBtKyfFFiwIs1Z395c5kY4CfXCat9Csfn8Yd3AHkSjozaW1Ntp8H4D+akTNQWDc/a6x8RSPXQQ
OAMeJlpbJYdNxY4fx5ihUV+pQlmFqivFQWnVCvC+qoVwRaSWND9tjSJT4kAaYWTSZVNsklLwqqucQVci9
aUKCyZUvHD5opUVbmSx4AZ0YzcgYKqis170VNihUXKZpMqqmrDOhUtrPc7FgAESqKsVAF4n
GVNjao+gXr+eIGgZQoK1PdVzcrWV01XK/Llqr6ogsVbQRQX4bwa1TRiOxaQ55GIVzvq/1OxaQ
paRhkSovXKNIMqF4F4SbHmX3Ep1zZFXljEVL3mRkpXc3As1It5pz0AkFlPJkkUqnF8rl3
GKFRb4HQkAAqmgplrzX/IiZYZSihUkZRG++0JwFdZWq+6qF1OvCI1oqGyZUtVtGD4S/FYQdLnRMDkYoW

Fqly7SqWNDbJIRNFkwu9ImMXixUWqWr9W5SuXyaJRRRPUGxBUNCPPQTTJGz4AOJtoPM7RkAgN6hVh
RBMSYcFBHPCKmSlWyKVWgKDjq38AAAAAAAAAnpiTR0a6TFpDPd0a7GiXolElK6sVKyqWmfkdDQBCJdX
bo8GTHUoPDgz/LS0pVSQ6J3ctCKhMKqVUb7cGThxXJJ5QoqJa8aJiv2MB46QH+jXY1amhrk4lSssVL63gTB
wEinNOqb4eDZ5oVyaVUrKyRvHikqwbgAF+yqRSSnWf0sDJDkWTBUpUVClWWOR3LACTmJOfGIe6u9T9
/J7R+cETx1W6bJXixSU+pgKAcEn19erUvl1SJiNJGjp1UkWLGlRQxU0UEBxDXZ3qOfjc6PxA+3GVLV+tWBEf
ThAMmVRKPYf2K9XTJUlKdZ1SrKRTJQ3L+HIHgZHu61XX3l2Sc5Kkoc4TKl6yXMkKbkaD4Bg82aHeIwckSU
OSBjraVLp8tWIFnLYNBM2cO03bZTLqbzs2YdBp6NRJfwIBQEil+npGG5Gn9bccVWZoyKdEwHiZVEp9rUfH
D7qMhnq7/AkETCl90D/aiDwt1X1K6f5+nxIB2Ya6u0Ybkaf1tx5RJp32KREwXmZoUH0tR8aNuXRa6b5enxI
BOJM514yUnOTOvhQAYOYcf2ARONQkAs5RowgD6hTBRoUC4eJLM9LMNpnZLjPbY2YfnOTx28xsh5k9Z
WY/N7OGMY+lzWzryLR5xtuORFUwry5rPF5WMePXAQBzWaywWIqM340UzlugCHckRkBEYjEVzlswftC
My7IgUKIFBYpOuI5prKRU0SR3H0ZwxEtKpQnX1y+YV68I14xEQETjCRXMqx83ZpGoolwzEggkzy9EY2ZRS
XdKukbSIUmPmdlm59yOMYs9IanJOddrZn8u6VOS3jDyWJ9z7uLzyRAvLlXJ0hUaaG+TRaNKVtUqxsXsAW
BGYoVFKl22SgMdx5UZHFCyqmb4wwoQIPGycpU0LFd/R5sisYSSVTXDjXQgICKxuEoWN2qw84SGujoVL6t
QoqxCkRjXi0RwRAuLVbZslfo72pRJDamgap5ifLGDgElWVCkSj2ugvU3RggIlK2u4XiQQUH68y7lU0h7n3D5
JMrN7JV0vabQZ6Zz75ZjlH5F0cy4DWDSqxMgbPQDAuYsXFXNnYgRaJBpTorxSiXJusoDgiiYLVDivXoUTjuo
BgsLMFCsuUQkNSARYJB5XsqJKyYoqv6MAOAs/TtNeKOngmPlDI2NTeZuk/xwzX2BmzWb2iJm9dqqVzOy
WkeWa29razi8xkAfUKMKAOkUYUKcIOmoUYUCdIgyoU2B2CPQNbMzsZklNkj49ZrjBOdck6SZJd5jZ8snW
mBULewAAIABJREFUdc7d45xrcs411dbWepAWmBlqFGFAnSIMqFMEHTWKMKBOEQbUKTA7+NGMPCx
p8Zj5RSNj45jZKyV9WNJ1zrmB0+POucMj/90n6QFJG/MZFgAAAAAAAEBumHPO2w2axSTtlvQKDTchH5
N0k3Nu+5hlNkq6T9Im59yzY8YrJfU65wbMrEbSw5Kun3Dzm8m22SZpf45fSo2k4zl+zvMRpDxzPctx59ym
mawwoUaD9Ps7G7LmR76zzrhGpTP+LQ3T7zYXeL3eyHWdTldY/n3DklMKT9ZzyXm++/xcCtLvmSzZwvy3
NCi/w5klY2Zp7ub2a58/HUH6NyHL1LzIc051isl53oyUJDN7laQ7JEUlfdU59wkz+6ikZufcZjP7maT1ko6OrH
LAOXedmV0u6W5JGQ0f1XmHc+4rnr8ASWbWPHK6eCAEKQ9Zzk+YMpM1P8KUVQpf3vPF653dwvJ6w5
JTCk/WsOScSpDykyW4Oc5FGLOHMbNE7iAK0msjy9SClgdn58fdtOWc2yJpy4Sx28f8/Mop1ntIw01KAAA
AAAAAACET6BvYAAAAAAAAAJg9aEaeu3v8DjBBkPKQ5fyEKTNZ8yNMWaXw5T1fvN7ZLSyvNyw5pfBkDU
vOqQQpP1myBSXHuQhj9jBmlsgdREF6bWSZWtDy4Cx8uWYkAAAAAAAAgLmHIyMBAAAAAAAAeIJmJA
AAAAAAAABP0IwEAAAAAAAA4InANSPNbJOZ7TKzPWb2wUke/ycz2zoy7Tazk37kBAAAAAAAADAzgbqBj
ZlFJe2WdI2kQ5Iek3Sjc27HFMu/S9JG59xbvUsJAAAAAAAA4FwE7cjISyXtcc7tc84NSrpX0vVnWP5GSf/Hk
2QAAAAAAAAAzkvQmpELJR0cM39oZCyLmTVIapT0Cw9yAQAAAAAADhPQWtGzsQNku5zzqUne9DMb
jGzZjNrXrdunZPExOTVNC3UKJOP07RRp0w+TtNGnTL5OE0LNcrk4zRt1CmTj9O0UadMPk7IoaA1Iw9LWjx
mftHI2GRu0BlO0XbO3eOca3LONRUWFuYwIpAb1CjCgDpFGFCnCDpqFGFAnSIMqFNgdghaM/IxSSvNrN
HMEhpuOG6euJCZrZZUKelhj/MBAAAAAAAAAOEeBakY651KSbpV0v6RnJH3PObfdzD5qZteNWfQGSfe6IN
0KHHPGqc4uDQwM+h0DmFJqKKXOzi5lMhm/owBAqJ3q7NIg+3wE2ODAoDo7T/kdAzijnp5e9fb0+h3DF
wMDgzrV2eV3DCBwYn4HmMg5t0XSlgljt0+Y/4iXmQBJajnWph//6Be679ubtXDJAr3jXX+ii5sulJn5HQ0Yt
WvHHn39nu9q62+f1iuvvUqvu/E1amhc5HcsAAiVI4eO6Uf/935tvu9+XbB6md76P96o9Rev8TsWMM7TT
+7UV+76tnY/s1ev/sNrdN0fb9LCxfV+xwJGdXf36MFfPqqv3PVtRaNR/dmtN+vyqy5VYVGB39HyzjmnJ5q3
6Z4vfFOHDxzRH7/xOl37mldoXl2N39GAQAhcMxIIokwmo/u+vVl3//M3JEn7nzuk5ke26ls/uEur1630OR0
w7Miho3rnn7xf7W0dkqT/ffe9enbnc/rMXR9RcUmRz+kAIByGBof05Tu/pfu+8yNJ0sH9h/Xwg836zua7t
WxFg8/pgGHP7z2gW954m7q7eiRJX7zjf+vI4WP6m0/8lZLJhM/pgGG/eegJfeDWvxudf+87/lb/+s3P6PKrX
uhjKm/s2rFHf3bTbRoaHJIkffbjd6m3p0/vfM+bOZgFUMBO0waCqrXluL75le+PGxscGNTunft8SgRke27Pg
dFG5Gm//q9HdfDAEZ8SAUD4HD3Soh98d9xJOurt6dPe3c/7EwiYxN49+0cbkaf96N9+oqOHW3xKBIyXy
WT0vW/+MGv83//vT3xI473dz+wdbUSe9s0vf0+tx477lAgIFpqRwDTEYjGVlBRnjRcU8M0zgiMxyZEQsVh
UiTgHwQPAdMViMRUUJrPGOdoMQZJIxLPGkgVJxWJRH9IA2SKRiCqrKrLGK6uzx2ajyfYZJaXFiid4Xw5INC
OBaamprdJ7/+c7x43VL5yv1esu8CkRkG35yka98MUbx429+ZYbtHjpQp8SAUD4LFhUp3e97+3jxlasatTKN
ct9SgRku2DNcq1au2Lc2F/c9qdcMxKB8oY3vVaxMV+KJ5MJXfual/uYyDtr1q9S3YJ548be+8F3qKq60qdE
QLDQlgem6WXXXKkvfedz+s3DT6iufp6aXnSxltDkQYBU1VTo45/9oH77m6e0Z9dzuuiSC3XxC9YpHs8+egI
AMLXXvO731dC4SL/9zZNa3LBQl1x2seonfKgE/DS/rlaf+9eP6bePbtX+5w7pkks3aMML1nEtOgTKhhes1df
v+xf95qHHFYlGdNnlL9Da9av8juWJJUsX6u5vfVbNj2zVsaOtuvTFG7Vh4zq/YwGBQTMSmKai4kJddsUluu
yKS/yOAkypfmGdXv2HdX7HAIBQKy0r0RVXX6Yrrr7M7yjAlBY3LNDihgV+xwCmFllEtP7iNVp/8Rq/o/iicfkS
NS5f4ncMIJA4TRsAAAAAAACAJ2hGAgAAAAAAAPAEzUgAAAAAAAAAnqAZCQAAAAAAMATNCMBAAA
AAAAAeIJmJAAAAAAAAABP0IwEAAAAAAAA4AmakQAAAAAAAAA8QTMSAAAAAAAAgCdoRgIAAAAAA
ADwBM1IAAAAAAAAAJ6gGQkAAAAAADAEzQjAQAAAAAAAHiCZiQAAAAAAAAT9CMBAAAAAAAAOA
JmpEAAAAAAAAAPBG4ZqSZbTKzXWa2x8w4UyrzezHWa23cy+43VGAAAAAAAADMX8zvAWGYWl
XSnpGskHZL6MSkkfknFc+6Emc3zJy0AAAAAACAmQjaZGXSrjnNvnnBuW9T0AGBsS6NGEQbUKcKAOkXQUaMIA+oUYUCdArND0JqR
hyUtHjO/aGRsrEOSNjvnhpxzz0nareHm5DjOuXucc03uaa2tq8BQbOFTWKMKBOEQbUKYKOGkUYUKc

IA+oUmB2C1ox8TNJKM2s0s4SkGyRtnrDMDzV8VKTMrEbDp23v8zIkAAAAAAAAgJkLVDPSOZeSdKuk+yU
9I+l7zrntZvZRM7tuZLH7JbWb2Q5Jv5T0fudcuz+JAQAAAAAAAExXzO8AEznntkjaMmHs9jE/O0m3jUwAA
AAAAAAAQiJQR0YCAAAAAAAAmL1oRgIAAAAAAADwBM1IAAAAAAAAAJ6gGQkAAAAAAADAEzQjAQAA
AAAAAHiCZiQAAAAAAAAAT9CMBAAAAAAAAOAJmpEAAAAAAAAAPEEzEgAAAAAAAIAnaEYCAAAAAAA
A8ATNSAAAAAAAAACeyEsz0sx+Pp0xAAAAAAAAAHNHLJdPZmYFkook1ZhZpSQbeahM0sJcbgsAAAAAA
ABAuOS0GSnpHZL+UtICSb/V75qRpyT9S463BQAAAAAACBEctqMdM59XtLnzexdzrkv5PK5AQAAAAAA
AIRbro+MlCQ5575gZpdLWjp2G865b+RjewAAAAAAACCLy/NSDP7pqTlkrZKSo8MO0k0IwEAAAAAAIA5
Ki/NSElNktY651yenh8+OXWiS0f3H1M0FlV9Q52KS4v8jgTkXG9Pn44+f0xDgynVLZmviuoyvyMBwJxwsr1
Txw60Kp6IacHSehUWF/gdCVBPV6+O7j+mVCqt+iXzVV7F+wLkX8vhNrUfbVdpRYnqGuYrHo/7HQk+6TrZ
pSP7WxSJmOob6lRSVux3JOC85asZ+bSkOklH8/T88MGR/cd05998Sft3H5Qkbbxyg978/htVU1edtexQb5
96j7ap52ibCmoqVbJgvhL80UQInGg9oW9//vt65GfNkqQFDXV61z+8Q4uXL/Q5GQDMbgf3HtYdH/yiWg
60SpKu2HSZbrj1daqsrZAkDXX3qudoq3qPHVdRXY2K6+cpXsKXopicc059re3qOnBMklPpknoVzquWmZ1
13bHaWzr0jc/eq9/+11ZJ0uIVC3XrJ27RwqX1eUiNuaqvtUNdB4/KpdMqWbJA+w+3644P3KXe7j5FohHde
Ovr9PI/ukrJgqTfUeGxYwda9MWPfEV7tz8vSbrw0jV624fepNoFNf4Gm0WG+vqHexdHWlVQVaHiRfOVLC
vxO9asF8nlk5nZj8xss6QaSTvM7H4z23x6yuW24C3nnH71Hw+PNiIl6YkHn9L2x57JWjaTSqn1t9t14P4H1f
7ULh3+xSM69MAjSvX1exkZOCfPPL5rtBEpDTfhf/LdnyudSp9hLQDA+UilUvrx//nZaCNSkn7940f17FN7JU
npwSEdfXirDv70IbVv262DP31IR3/9uNIDg35FRsD1thzXvh/8TK2PPaXWx7Zp3w9+pt6W4zN+nh3NO0cb
kZJ0cM9hPfD/HlQmk8llXMxhva3t2vvDn6rl0SfV2vy0Dj2xU3f/3dfU290nScqkM/r257+vQ3uP+JwUfnj4p
4+NNiIl6enfPKOnHtnuX6BZxqUzan9ypw78+FfDvYsHHtXBn/xaQ719fkeb9XLajJT0GUmfflfQRSa+V9Pcj86
cnhNTgwJCefGhb1vjuJ/dmjQ10dqnj6WfHjfUcatHAiVN5ywfkyvM792eNbW/epZ6uHh/SAMDc0Nfdp6c
n+YJz/57hL0EHTp5S57PPj3usc+8BDZzkvQUmd3LXc3JjGoYuk1HHjuz3rWezZ/tzWWPbHtmugT4a4ciNU
88dkhvzpfegmdpbOrKWa2894WUsBEA6ldbWST6D72je6UOa2WngVLfato5//9HX2q6B9k6fEs0dOW1G
Ouf+60xTLrcFbyULEtp45Yas8VUbV2aNubSTJrlcaCbNkWUIvoYVi7LGLrzkAhVyWgwA5E1RSZE2vHhd1vjS
C5ZIGj5yYTKOo9MwhVT/QNZYepKxs1m5fnnW2MVXrFdBEe8LkBsTj/BOZDKaV599GayauiqvIiEgorHopJ
/BL7x0rQ9pZieXyUiZSXoXGXoX+ZbrIyMlSWbWZWanJkwHzewHZrbsLOtuMrNdZrbHzD44yeNvMbM2M
9s6Mr09H68B2a581Yu14sLG0flLX3GJ1jWtzlouWV6i4oXzx43FS4qUrORi3wi+FeuW6oprmkbnFy9fqJddd
4XihXzoAIB8icai2vSGV4y7Pu/V11052ghKVpSqoKZy3DrJqnIlynlvgclVrcluIlavy/4S/WzWXnKBXvx7LxydX7
Zmqa56zRUzvvYkMJXy5UvGzacOHdXbP3SzSsqHr1kXjUX15vffqEXLFvgRDz570TUv1OqLf/e3a+OVG3ThZ
TQjcyVRVqLSxvEHo8QKC1RQWe5TornD8nHDazP7mKRDkr4jySTdIGm5pMcl/blz7uop1otK2i3pmpH1H5
N0o3Nux5hl3iKpyTl363TzNDU1uebm5rMviLPq6uzWsQMtisaiqlsyX0XFhZMuN3CySyd27tWpfYdUtGCe
atZfoILqCo/T+mbG706p0eBw6Yw6j7Tq8N7DGhocUl1DnWoa6hWbXUdGntMnKOoUHqNO56BTJ7p07E
CL4sm46hvmq6Dwd3fT7j/RqY4de9W9/4hKFtepat1KFVT5/mGBfX5ApYdS6jl0TK2Pb5ecVPuCtSpZVKdo
YuZ3JO7r6dfRA8eUTqVVt3ieSitK85A4b/hbGnCZVErdh1vV9vh2ZVJp1V68RqVL6nWio0ttx9pVWl6suiXzF
Yvl696zgUCdnkH3qR4dO9Aii0RUv2Seirh5W04NdHbp5K7n1LnngArrqlWzfrUKaysnW5RvoXIoX3/RrnPO
XTRm/h4z2+qc+2sz+59nWO9SSXucc/skyczulXS9pB1nWAceKi0vUen6s99ZKllRqvmXXaTajWsVicdkkbwc
hAvknEUjqlhcp7L6WjmXUTQ+8w8tAIBzU1ZZqrLKyRs9BZXlqr98ozJNFyqSiHNkGs4oGo+prHGRihfVjc6fq
8LiAi1bszRHyYDxIrGYyhoWqGTh/HHvPWvqq1UzyenamHtKyoq14sIznmCK85AsL9X8Szeo5qLV9C48lK/f
cq+Zvd7MIiPT6yWdvpXymQ7FXCjp4Jj5QyNjE73OzJ4ys/vMbPFkT2Rmt5hZs5k1t7W1ndOLwPkxM0WT
Cf5nngI1GmyRWJRGpKhThAN1OneMvrcIWSOSGvVPNB47r0bkXEKd+ov3ntNDnSJf6F14K1+/6TdKepOk
VkktIz/fbGaFkqZ9evUUfiRpqXNug6SfSvr6ZAs55+5xzjU555pqa2vPc5NA7lGjCAPqFGFAnSLoqFGEAXWK
MKBOgdkhL18Tjpxm/ZopHn7wDKseljT2SMdFI2Njn7t9zOyXJX3qXDICAAAAAAAA8FZOm5Fm9gHn3KfM
7Aua5HRs59y7z/IUj0laaWaNGm5C3iDppgnbqHfOHR2ZvU7SM+efHAAAAAAAAEC+5frIyNONwXO6pZV
zLmVmt0q6X1JU0ledc9vN7KOSmp1zmyW928yuk5SS1CecwAAAAAAEC+5bQZ6Zz70ch/vy5JZlb
knOud4XNskbRlwtjtY37+kKQPnX9aAAAAAAAAAF7Kyw1szOzFZrZD0s6R+YvM7K58bAsAAAAAABAOO
Trbtp3SPp9Se2S5Jx7UtVedoWAAAAAAAAgBDIVzNSzrmDE4bS+doWAAAAAAAAgODL9Q1sTjtoZpdLcm
YWl/QecddrAAAAAAAAYE7L15GR75T0F5IWSjos6eKRqOAAAAAAAABzVL6OjOx2zr0xT88NAAAAAAAAII
Ty1Yx82sxaJP1qZHrQOdeZp20BAAAAAAAACIG8nKbtnFsh6UZJ2yQnaNqzWxrPrYFAAAAAAAAIBzycmS
kmS2SdIWkl0i6SNJ/mY1sAAAAAAAAwiFfp2kfkFKRCpJkZss1fKQkA
AAAAAAAgDkqX83I/yXpx5IWm9m3m3Jf1c0gems6KZbTKzXWa2x8w+eIblXmdmzsyachMZAAAAAAAAAQD7
F8vGkzrmfmtnjWm9m3m3Jf1c0gems6KZbTKzXWa2x8w+eIblXmdmzsyachMZAAAAAAAAAQD7
HhlpZi84PUlqkHRU0hFJS0bGzuZSSXucc/ucc4OS7pV0/Ox7ZnF6zdZnbfyHSrmcWnsephSYvHzC8a
ykl59l/YWSDo6ZPyTpsrELjDQ1Fzvn/sPM3n9OKQEAAAAAAAB4LqfOSfy5L5c+Tp8YxWUS4Zl5yS9RZL5Xw
klasmRJPmMB54QaRRhQpwgD6hRBR40iDKhThAF1CswOebmBjZnFzezdZnbfyHSrmcWnsephSYvHzC8a

GTutVNKFkh4ws+c1fE3KzZPdxMY5d49zrsk511RbW3vuLwbIE2oUYUCdIgyoUwQdNYowoE4RBtQpMDv
k5QY2kr4oKS7prpH5N42Mvf0s6z0maaWZNWq4CXmDpJtOP+ic65RUc3rezB6Q9D7nXHPOkgMAAAAA
AADIi3w1I1/onLtozPwvzOzJs63knEuZ2a2S7pcUlfRV59x2M/uopGbn3OY85QUAAAAAAACQZ/lqRqbNbL
lzbq8kmdkySenprOic2yJpy4Sx26dY9urzzAkAAAAAAADAI/lqRr5f0i/NbJ8kk9Qg6U/ztC0AAAAAAAAAIZC
XZqRz7udmtlLSqpGhXc65gXxsCwAAAAAAAEA45OvISEm6RNLSkW1cbGZyzn0jj9sDAAAAAAAAEGB5aUa
a2TclLZe0Vb+7VqSTRDMSAAAAAAAAmKPydWRkk6S1zjmXp+cHAAAAAAAAEDKRPD3v05Lq8vTcAAAAA
AAAAEIop0dGmtmPNHw6dqmkHWb2G0mjN65xzl2Xy+0BAAAAAAAACI9cn6b9mRw/HwAAAAAAIBZI
tfNyI2SHpL0uHMulePnBgAAAAAAABBiuW5GLpJ0h6TVZrZN0q813Jx8yDnXkeNtAQAAAAAAAiRnDYjnX
PvkyQzS2j4jtqXS/pTSfeY2Unn3Npcbg8AAAAAAABAeOT6yMjTCiWVSSofmY5I2panbQEAAAAAAAIgVzf
TfseSeskdUl6VMOnaH/OOXcil9sBAAAAAAAAED6RHD/fEklJSckHZZ0SNLJHG8DAAAAAAAAQAjl+pqRm
8zMNHx05OWS/krShWbWIelh59z/yuX2AAAAAAAAAIRHzq8Z6Zxzkp42s5OSOkemV0u6VBLNSAAAAAA
AAGCOyvU1I9+t4SMiL5c0pOFrRj4k6aviBjYAAAAAADAnJbrIyOXSvq+pPc6547m+LkBAAAAAAAhFiurx
l5Wy6fDwAAAAAAMDskeu7aQMAAAAAADApGhGAgAAAAAAPAEzUgAAAAAAAAAnghcM9LMNpn
ZLjPbY2YfnOTxd5rZNjPbamYPmtlaP3ICAAAAAAAAmJlANSPNLCrpTknXSlor6cZJmo3fcc6td85dLOlTkj7nc
UwAAAAAAAAA5yBQzUhJl0ra45zb55wblHSvpOvHLuCcOzVmtliS8zAfAAAAAAAAgHMU8zvABAslHRwzf
0jSZRMXMrO/kHSbpISkl3sTDQAAAAAAAMD5CNqRkdPinLvTObdc0l9L+pvJljGzW8ys2cya29ravA0ITAM
1ijCgThEG1CmCjhpFGFCnCAPqFJgdgtaMPCxp8Zj5RSNjU7lX0msne8A5d49zrsk511RbW5vDiEBuUKMIA
+oUYUCdIuioUYQBdYowoE6B2SFozcjHJK00s0YzS0i6QdLmsQuY2coxs38g6VkP8wEAAAAAAAA4R4G6Zq
RzLmVmt0q6X1JU0ledc9vN7KOSmp1zmyXdamavlDQk6YSkN/uXGAAAAAAAAMB0BaoZKUnOuS2StkwY
u33Mz+/xPBQAAAAAAACA8xa007QBAAAAAAAAzFI0IwEAAAAAAB4gmYkAAAAAAAAAE/QjAQAAAAA
AADgCZqRAAAAAAAAAADxBMxIAAAAAAACAJ2hGAgAAAAAAPAEzUgAAAAAAAAAnqAZCQAAAAAAAM
ATNCMBAAAAAAAAeIJmJAAAAAAAAAABP0IwEAAAAAAAA4AmakQAAAAAAAAA8QTMSAAAAAAAAgCd
oRgIAAAAAAADwRMzvAGHinFN/e4e6ntuvzOCQypY1qKC2RpEYv0b4o7+9Q13PH1C6r1+ljcP1GE3E/Y4F
AKEy2HlK3QcPa6D9hEqWLFRh3TzFCgv9jgVMyaXT6m8/oa59z0mSSpctVUF1lSwa9TkZMF56aEj9bcfVte
+AooVJlS5dooLqKr9jYZZKDwyor7VNXc8fVKK0RCUNi5WsrPA7FoBJ0EWbgYGOEzr6wINSxkmSeg8f1fwrL
lPxwnqfk2EuGjhxUkcfeFAunZEk9R45ptrLmlTasMjnZAAQHkM9PTr63w8p3dcvSepraVX5BctVtWGdLMIJ
JAim/vYOHX3g16Pz3QcOq/7qK1Q4r9bHVEC2vqMtan2keXS++/kDWvDyq2gQIS+6DxxS+xPbJA3XXtdzB7
TgFS9RoqzM52QAJuJd9gz0HWsdbUSednLns8qkUj4lwlzWf7x9tBF52skdO5UeHPQpEQCEz2DnqdFG5G
mde/ZpqKfXp0TA2XXte35aY4Cf0oNDOrFj17gxl86ov+24T4kwm6X6+rLqLTM0pIETnT4lAnAmNCNnwE0
6OOkoAAAIA3bjmCUoZYQGxQoAcx7NyBkoqpsnRWzcWMWaC7hmJHxRUFMti47/X7hi7SpFEwmfEgFA
+CQqyhQtLBg3Vr5imeLFRT4lAs6udNnS7LHG7DHAT9FEXJVrV40bs2hEyXnVPiXCbBYrLMyqt0g8rmRFuU
+JAJwJXbQZSFZVasHVV+rUcweUGRpUWeNSFdSyM4U/kpUVqr/6SnU9f3DkBjZLVFBb43csAAiVeHGx6q
+6XN0HD6u/vUOlSxapsG4e14tEoBVUVw2/B9j3vCQ3egMbIGgK6+dr/pWXjb+BTWWl37EwS5UsWaRo
QXLcDWwS5VwvEgiiOduMTPX3Kd3fJ4tEFC0oVDSRPOs6ZqaCmmoV1NCARP65dFqp/j5lhgYUiSUULSxU
JDr+f9mC6io+fADAWaT7+5Qa3ecXZR1BnigvUxUfVuCjTDqldH+fMkODisSTihYUZO3zx7JoVIXzalQ4jy8h4
Z304KDS/b1ymYyiBYWKFRSedZ1oPK7iBfUqXsANP5F/kURCBTVVipcWyaJRxQo4ywEIqsA1I81sk6TPS4pK
+rJz7pMTHr9N0tslpSS1SXqrc27/TLaR6utR177dcum0JCmSSKqkcaViyYKzrAl4wzmngZPt6j18YHSsoLZOhf
PqZdGoj8kAIFyGerrVtW+35IZv+BUtLFLJkuWKJs/+JSTgBZfJaOB4q/pajoyOFdYtUkENR+giONID/erav1eZ/
r7hgUhEZctWKVZU7G8wYIxUT5e6nnt29L4OseJB1sIVAAAgAElEQVRSFS9pVDTOZayAoAnUOxwzi0q6U9
K1ktZKutHM1k5Y7AlJTc65DZLuk/SpmWzDOaf+ttbRRqQkZQYHlOriLlsIjvRAv3qPHBw31t92TOmB/inWA
ABM5NLp4QbPSCNSktJ9vUr1dvuYChgvPdA/rhEpSX3HDrHPR6AM9XT/rhEpSZmM+lqPymUyU68EeCiTS
g0fyDHmBrOpni6le3t8TAVgKoFqRkq6VNIe59w+59ygpHslXT92AefcL51zvSOzj0haNJMNuExG6f7erPFUP
2/4EBwunZ70Tu2ZdMqHNAAQTi6TUXqgL2s8MzToQxpgcm6KffvYL84Bv2UmaY6n+/toRiIwXCat9OBA1
ngmxecnIIiC1oxcKGns4WCHRsam8jZJ/zmTDUSiUSUqs6/5mCjlWlEIjmgiocjE0wkikWld2xQAMMxiMSUr
svf50UKuIYXgiMQTWZdgsVhMkQSnFSl4YsWlWWOJympFYoG76hfmqEgsrkR59rX0owVcig0IoqA1I6fNz
G6W1CTp01M8fouZNZtZc1tb27jHEuVVSlbVSjLJIiqsW6hYcUn+QwNjnKlGI/GEShqWKzpyYfBIIqnSpSsU5
bqm8NiZ6hQliqnq1MyUrK5RYqQhaZGoihYuUayIfT68daa/pdFkgUqWrlBk5AvHSLJAJQ0r+AISnjtTncaKi1
VYv1gauY5porJ60i97gHybcp8fiahwfr3iZRXD89GoihcvVYwvIIFAMjfJqaB+MbMXS/qIc+73R+Y/JEnOuX+Y
sNwrJX1B0kudc61ne96mpibX3Nw8bsxlMsOnaZkUiSdlZrl6GcCMi2myGpWGTyvIpIYUicYUicdzEg7QOdS
oNHWdAnmSszp1mYzSQ4MyMxo8yLUc7vOHlEmlFInFOdoMuZTTfX56YECSGz6ilxssIXdyt89Pp4f3+ZxVh
tyjaZRDQXun85iklWbWKOmwpBsk3TR2ATPbKOluSZum04icikUiHGWGwIvEYnwgAYDzZJGIYuzzEXDDT
Ui+eESwRZM0dxBsFo0qFi30OwaAswjU11nOuZSkWyXdL+kZSd9zzm03s4+a2XUji31aUomk75vZVjPb7F
NcAAAAAAAAADMQuEOunHNbJG2ZMHb7mJ9f6XkoAAAAAAAAAOctUEdGAgAAAAAAAJi9AnUDm3wx
szZJ+3P8tDWSjuf4Oc9HkPLM9SzHnXObZrLChBoN0u/vbMiaH/nOOuMalc74tzRMv9tc4PV6I9d1Ol1h+fc
NS04pPFnPJef57vNzKUi/Z7JkC/Pf0qD8DmcijJmluZvbr33+dATp34QsU/MizznVKSY3J5qR+WBmzc65Jr9z
nBakPGQ5P2HKTNb8CFNWKXx5zxevd3YLy+sNS04pPFnDknMqQcpPluDmOBdhzB7GzBK5gyhIr40sUwt
aHpwdp2kDAAAAAAAA8ATNSAAAAAAAAACeoBl57u7xO8AEQcpDlvMTpsxkzY8wZZXCl/d88Xpnt7C83r

DklMKTNSw5pxKk/GTJFpQc5yKM2cOYWSJ3EAXptZFlakHLg7PgmpEAAAAAAAAAPMGRkQAAAAAAAAA
8QTMSAAAAAAAAgCdoRgIAAAAAAADwBM1IAAAAAAAAAJ6gGQkAAAAAAADAEzQjAQAAAAAAAHhiTj
QjN23a5CQxMXk1zRg1yuTxdE6oUyaPp3NCnTJ5PM0YNcrk8XROqFMmj6dzQp0yeTwhh+ZEM/L48eN+R
wDOiBpFGFCnCAPqFEFHjSIMqFOEAXUKhNecaEYCAAAAAAAA8B/NSAAAAAAAAACeiPkdAAiLgYFBbX9q
l3Zs26nKqgpt2LhWixsW+h0LGKf12HFt2/qMDh08opWrGnXhhjUqqyj1OxYwzrM79+mpJ3YonU5r/cVrtH
rdSpmZ37EAIFSOHm7Rtq07dOxIm1atXaELL1qt4pIiv2MB4+zc/qy2bX1GkUhE6zeu0QWrl/sdyTMH9x/W
U0/s0ImOk1q7frXWbVilZDLhdywgEGhGAtP0q188rNveefvofOOKJbrza5/SoiX1PqYCfufEiU597MOf1X/9
7KHRsVv/6m166/+4SbEYf+4RDDu3P6u3vuE96u7qkSQlkgl95d47dNEL1vmcDADCo62lXX/97o9qa/PTo2
N/84nb9Pqbr/cxFTDetq079LY3/KX6+wckSUXFhfrad/9Za9Zf4HOy/Dt04Ij+4i1/ref3HRwd+6e7P6ZXbLrK
x1RAcHCaNjANHe0n9emP3Tlu7Lk9B7Rz+26fEgHZ9u1+flwjUpLu/sI3dHD/YZ8SAdl+fv+vRhuRkjQ4MKjvf
uOHymQyPqYCgHDZvXPvuEakJN3xybt15OBRnxIB2e779o9GG5GS1NvTp/v/45c+JvLOM0/vHteIlKTPfPw
uneg46VMiIFhoRgLTMDgwqJMdnVnjvT19PqQBJtfX1581NjQ4pP7+QR/SAJNrOdqaNXbk8DFlMs6HNAA
QTn292e9Be7p7NTA45EMaIFsmk9GRwy1Z40ePZL8PmI16e7Lfl5/oOKkB3pcDkmhGAtNSO79ar3/T+NN
eYrGoll/Q6FMiIFtD4yKVV5SNG9v4wg1atJhLCSA4fu9VV2eNvf7m6xWLRb0PAwAh1biiQYWFBePGrnnVS
1W/cL5PiYDxIpGI/vim12SNv+r6V/iQxnsrVjVmvbd5w5teq3l1NT4lAoLFl2akmW0ys11mtsfMPjjJ47eZ2Q
4ze8rMfm5mDWMeS5vZ1pFps7fJMVdFo1Hd9JY/0jve82ZV11Zp/cVrdNc3Pq3V61b4HQ0Ytbhhof71m5
/WS17+IlVWleuPbni1PvLJ96m0rMTvaMCojS/coE/+899qydKFWrCoTn/7D3+ly6+61O9YABAqy1cu1d3f+
qxe+OKNqqqu0Bvf+sd69wduUUFB0u9owKgXXXmJ/u5TH9DCxXVa3LBQf3/Hh3XJZRf5HcsTq9et0F1f/7
QuvGi1qmur9I73vFk3/MkfKhLheDBAksw5b0+LMrOopN2SrpF0SNJjkm50zu0Ys8zLJD3qnOs1sz+XdLVz7
g0jj3U752b0ybqpqck1Nzfn7DVg7nLOqb2tQ4VFBSouKZ5qsRnfEpYaRS719fWr+1S3KqoqFI9PeuOac7pt
MXWKXDp5olMu41RZXTHVItQpwoB9PnzV29Or3p4+VVZXKBqd9Ahz/pbCdyc6TsoipoqK8qkWmbV12t3
Vo/6+flXXVsnsnF4mgoN/wBzy4/aql0ra45zbJ0lmdq+k6yWNNiOdc2OvavuIpJs9TQhMwcxUM6/a7xjAG
RUWFmSdugUETUXllB9IAADTVFRcpKLiIr9jAGdUWTXlF4+zXklpsUpKpzyIBZiz/DhGeKGksbeVOjQyNpW3
SfrPMfMFZtZsZo+Y2WvzERAAAAAAAABA7gX6ggVmdrOkJkmfHjPc4JxrknSTpDvMbPkU694y0rRsbmtr8
yAtMDPUKMKAOkUYUKcIOmoUYUCdIgyoU2B28KMZeVjS4jHzi0bGxjGzV0r6sKTrnHMDp8edc4dH/rtP0
gOSNk62EefcPc65JudcU21tbe7SAzlCjSIMqFOEAXWKoKNGEQbUKcKAOgVmBz+akY9JWmlmjWaWkHS
DpHF3xTazjZLu1nAjsnXMeKWZJUd+rpF0hcZcaxIAAAAAAABAcHl+AxvnXMrMbpV0v6SopK8657ab2Ucl
NTvnNmv4tOwSSd8fuePUAefcdZLWSLrbzDIabqR+cuxduAEAAAAAAAAElx9305ZzboukLRPGbh/z8yunW
O8hSevzmw4AAAAAAABAPgT6BjYAAAAAAAAAZg+akQAAAAAAAAA8QTMSAAAAAAAAgCdoRgIAAAAA
AADwBM1IAAAAAAAAAJ6gGQkAAAAAAADAEzQjAQAAAAAAAHiCZiQAAAAAAAAAT9CMBAAAAAAAAO
AJmpEAAAAAAAAAPEEzEgAAAAAAAIAnaEYCAAAAAAAA8ATNSAAAAAAAAACeoBkJAAAAAAAAwBMxv
wNgdhrq7lXXoWPqPnhURXW1Kl1Sr2R5qd+xgGnpbW3XqX0HleobUMWKBhXW1yga488l/OecU29Lu07
tPaBMKq3yFUtUVFejSDTqdzQACBSXyai3pV2dew7IyalixRIVzauRRTkWA8Ey6b59fo0iMfbtgBeGevrUfbh
FXfsPq3BetcoaFihZUeZ3rFmPT9fIuXQqpZbfPKUTO/dJkjqf3a+T82u09NqrFCsq8DkdcGZ9bR3a98OfyaXS
kqQTz+xVw7VXqaxxkc/JAKmvtV3P/fBncpmMJKlj+7NqvO7lKllU53MyAAiW3pZ27fvhzyTnJEkdTz+rxutfo
ZIF83xOBow36b79NS9XyWL27UC+ZdJptT2+Q+3bdkka6V08s09LX3O14sVFPqeb3fhqEDk3eLJrtBF5Wl/L
cfWf6PQpETB93YdbRhuRp7X+drvSQ0M+JQJ+59S+Q6MfVk5r27pTLp2ZYg0AmJs6du4dbURKkpxTx45n/
QsETGHSffuTzyiTTk+xBoBcGezsVvvTu8eN9XecVH8HvYt8oxmJ3Bv7xm/c8OTjQJBM1tRx6bRE+SIAJvtg4t
JpOQoUAMZxk/29HOKLGwTPZPv2TIpGJOAJ5ybtX7gM763zjWYkci5RXqrShgXjxypKVVDJdRcQfCUL50sR
GzdWu3Gtoom4T4mA3ylftjhrrGbDKq4ZCQATVK5anjVWdeEKH5IAZzbpvv2i1ezbAQ/Ey0tUvrJh/FhJkQq
qyn1KNHdwzUjkXDQRV/1LLlFR/Tyd2ndQJQvnq2JVI9dcQCgUzqtS43WvUPu2XUr1Dahm/QVcjw+BUTi/
Wo3XvVzHn9oll0qrev0FKl443+9YABA4xfU1Wvqal+n4k7skOdVsWKXiulq/YwFZ2LcD/onGYqq77CIVzqtS
57MHVFRfq8rVy5QoLfY72qxHMxJ5kSwr1bwXrFXNRRyxg3CxSEQlC+apuL5WyjjuuolAiUSjKllUp+KRGzBY
hPoEgMlEYjGVLq4fPuNB/L1EcLFvB/yVKCtR7UVrVH3hBfQuPMRfOsxYf2+/BvoHp7Us/zMjrIYGhtTfP+B3
DGBSFomot6dfqaGU31EAINAsEslJc2egf1B9Pf05SARMbrJa7enqVSrFvh7Dn8H7+/hskk/0LrzFkZGYtp6uX
j350Db9x7d+okQyruvf+gdad8lqxZNcSw+zR2oopZ1P7NYPv7ZF3Z09uvbGV+oFL7lIpRUlfkcDJEltR47rwf9
98RA/9+FEtuWCxXn3z76lxzVK/YwHArDQ0OKQdv92l//e1LRroHdC1b7xGG6/YoOIyLj+E/Gk93KZfbXlYj/zk
MTWuadC1N12jxtUNZ18Rs05fd5+efGS7/v0bP1Y0HtX1b/kDrXvhaiULEn5HA87LeX1NaGbJ6Yxhdtj2yHb
ddftXtH/3QT27bZ8+894v6Nmn9/kdC8ipvTue0z+++/Pa+fhuHdp7WF/6+Nf1+H9v9TsWIGn4iN1/+9KP9
G/3bNbRAy169GfN+od33aGjB1r8jgYAs9Kep/fp03/5z9r95B7tf/ag/vUjX9WTD2/zOxZmscH+QX3viz/QD
7787zp6oEUP3f8b/eO77lDLoVa/o8EH25t36l8+fl+e33VAe59+Tp9737/o2af2+B0LOG/ne87Cw9McQ8gN
DQ79f/buPM6yqjr4/qjr/VXNXz3E3PDQ3YCCI0ICIoKrFNFIxRgxgj6hOT14c8bzQaESMiiUQTjfooJqKioiFEy
WtCFCXGAUREuxmkZW4a6AF6nqca1/tH3W5uDW1X162qeQfI8/18zqfuWefsU+s2mzp1V529Nz/4tx/1i
C//yb1lyEYaPA+teTJM7BK79cYfsm/P/jJlJD1n84at/PwHd3eJ7du9j3WrnylTRpI0st13Z8/C4w/+9Ud9nrJI
Olqbnt3CL//nni6xPbv2sv7JZ8uUkcqlva2dH377Jz3id932qzJkIw2sfg3TjoiZwGygMSJeCTh0MjUFQ
F4yb0HKY61iEqGmEamxp6xMaMH0OVC9moAtTUVFNbW0tLc9cPwbV1zroiSYOhaVxjj9iYCU1UuciIBklN
TTU1tdW0tnSdK7LGe/2oE1XB2F6miurtc7k03PT3Lvoq4JPAHOAfgU8VtvcCVwxaqokNTU1/O4lF3Qpy

NQ31HHaeaeWMStp4C1ZegJNY5/74BERvO4dv0dDozNQqPymzprC6//kNV1i8xbPYd5xc8qUkSSNbKe++
GQamp77HSCqgte8dZl/BNKgmX7MNC56++91iS183nzmHju7TBmpXKqqqvidN55PddHCKrX1tZz1yqVlzE
oaGP26i2bm14GvR8QfZOa/D3BOqlDHv+A4PvzF9/ObXz1MXUMtJy19HgtOmFfutKQBNW/xXP76i+/nwe
UPs2/3Pp5/1hIWuTiIKkRVVRUvu+hcZi86hkfufYxjFszkxBcez+Tpk8qdmiSNSAtOmNf5++/yR2je38zJZy5h
4RIXEtHgqaqu4pV/8FLmLZ7Do/c/zuyFszjxhcczaerEcqemMlh88rF8+LrOz+DVNdU8/8znuZiRRoRS/6T33
Yi4BFhQfK3MvLrE66oCVddUs/jkY1l88rHlTkUaVPOO80kzVa6x48fwwnNO4YXnnFLuVCRpVJh//DzmH+8
f4DV0xk4Yy2nnvoDTzn1BuVNRmVVVV3Hc8xdx3PMXlTsVaUCVWoz8T2AncA/QXHo6kiRJkiRJkkaqUouR
czJz2YBkIkmSJEmSJGlEK3UZuLsi4uQByUSSJEmSJEnSiNavJyMjYiWQhfZvj4jVdA7TDiAz04msJEmSJEmSJH
XR32HarxnQLCRJkiRJkiSNeP0qRmbm0wARMbmXw7tLykiSJEmSJEnSiFTqnJH3ApuBx4DHC6+fioh7I+L0
wzWKiGUR8WhErIqIy3s5/t6IeCgiHoiIH0XE/KJjb4uxwvb20rMX5IkSZIkSapYEbGn2/6lEfH5I7S5S5sLeaW7d
zXhYR3z3Msb+IiKajz/bISi1G/hD43cycmplTgFcD3wXeDXyhtwYRUQ1cWzh3CfDmiFjS7bT7gKWFuSdvBv
6+0HYy8BHgLOBM4CMRManE9yBJkiRJkiSNGJl5S2Z+vIRL/AVQkcXIF2XmbQd3MvO/gbMz826g/jBtzgR
WZebqzGwBbgIuKj4hM3+SmfsKu3cDcwqvXwX8MDO3ZeZ2Oouhy0p8D5IkSZIkSdKwExHTIuLfI2J5YTun
ED/09GREHBsRd0fEyoj4225PWo6NiJsj4pGI+Jfo9H+AY4CfRMRPBjrnUouRz0bEByJifmH7K2Bj4enHjsO0
mQ2sLdpfV4gdzjuB7x9t24h4V0SsiIgVmzdv7st7kYaUfVTDgf1Uw4H9VJXOPqrhwH6q4cB+qlGsMSLuP7g
BVxcd+yzw6cw8A/gD4Mu9tP8s8NnMPJnOWlqxF9L5FOQSYBFwTmb+X+AZ4PzMPH+A30vJxchL6Hxq8T
8K27xCrBp4U4nXJiL+CFgK/MPRts3M6zJzaWYunTZtWqmpSAPOPqrhwH6q4cB+qkpnH9VwYD/VcGA/1S
i2PzNPPbgBVxYdeyXw+UKR8hZgfESM7db+bODbhdc3djv2q8xcl5kdwP3AgoFPv6t+raZ9UGZuAf78MIdX
HSa+HphbtD+nEOsiIl4JfAh4aWY2F7V9W2P+17xpIkSZIkSdKIUUXnNIoHioMR0df2zUWv2ymxVtgX/Xo
yMiI+U/j6XxFxS/ftCM2XA4sjYmFE1AEX01m5Lb7+C4EvAhdm5qaiQ7cBvxMRkwoL1/xOISZJkiRJkiSNNv9
N0YOCEXFqL+fcTecQbuisw/XFbmBcaan1rr/Vzm8Uvn7yaBtmZltEXEZnEbEauD4zH4yIq4EVmXkLncOyx
wLfLlRy12TmhZm5LSL+hs6CJsDVmbmtn+9BkiRJkiRJGs7+D3BtRDxAZ53vDuDPup3zF8A3I+JDwA+AnX24
7nXADyLimYGeN7JfxcjMvKfw9faIaATmzZeajR9H+VuDWbrEri16/8re0vR64/qiTliRJkiRJkoaZzBzbbf9rwNc
Kr7cAf9hLm0Pn0Dnt4YsyMyPiYuCEwjk/pWj6w8y8rOj154DP9YkSAjYR8Vo6J7f8QWH/1D4M05Yk
SZIkSZI0NE4H7i88Pflu4C/LmUypk1JeBZxJoYqamfdfdHxMoYqamfdHxMISrylJkiRJkiRpAGTmz4AXlDuPg0p6M3MzczLDXlDuPg0p6MhJozczu48y
zxGtKkiRJkiRJGoFKfTLywYi4BKiOiMUR8TngFyWmIyU4BKiOiMV0Tpp5V+lpSZIkSZIkSRppSn0y8s+Bk4Bm4F/pXI3nL0pNSpIkSZIkSdLI
U+qTkbMy80PAhwYiGUmSJEmSJEkjV6lPRl4fEU9x0R8b8j4uQByUqSJEmSJEnSgIiIZRHxaESsiojLezleHx
H/Vjj+y4hYUIjXRsTXI2JlRDwcER8sNZeSipGZ+VLgecDngInDA9yJiW6lJSZIkSZIkSSpdRFQD1wKvBpYAb46IJd
1OeyewPTOPAz4NfKIQfyNQn5knA6cDf3qwUNfJoiXAOcWtonAd4GflXJNSZIkSZIkaTTa9sCKS4BrgH
nAGuCKyacsvbHEy54JrMrnM1QARcRNwEfBQ0TkXAVcVXt8MfD4iAkhgTETUAI1AC7CrlGRKnTPyp8A9wN
8Bt2ZmS4nXkyRJkiRJkkadQiHySyS0BTITQf+NK2B1ZQYkFyNrC2aH8dcNbhzsnMtojYCUyhszB5EfBsIa/3ZGZ
Jo6JLnTNyKnA1cDbwg4j4n4mxKvKUmSJEmSJI021/BcIfKgpkK8XM4E2oFjgIXAX0bEolIuWOWOqckTuA1cC
TdFZIjwXOK+WakiRJ0ig07yjjjfbUemFu0P6cQ6/WcwpDsCcBW4BLgB5nZmpbgJ8DS0S0tJpqRiZESsBj4
FTAL+CTihsKiNJEmSJEmSpL5bc5Txvvo1sDgiFkZEHXAxcEu3c24B3l54/QfAjzMz6Ryq+XKAiGgAXgQ8Usr
lS54w8LjM7SryGJEmSJEmSNNpdQdc5IwGaCvF+K8wBeRlwG1ANXJ+ZD0bE1cCKzLwF+ApwY0SsArbRWbCEzlW
SOlfh/mpEPAgE8NXMfKCUfEpdTbumsIz3S+hcEvNuYF2JGSVJkiRJkiSNMpNPWXrTtgdWwMCvpk1m3grc2i32kaLXB4A39tJuT2/xUp
RCJkiRJkko3+ZSlN1Fi8XGoK3XOyMuBsZl5E7CcziUxzy7xmpIkSZIkSZJGoFKLkTMKrwB9hiWBBXNoFgZIWb2n69A67nBtX2cjT6T+A4AA
YB6wBrhi0ZtedEZWMWIz4Xkg0I8wN8VYzqhdXBFJXqLCFXh9c3A5yygy6+CWUsIC1iUN046IjwA
fAD5YCNUC/1jKNSVJkiRJkiSNTCUXI4HXARcCewEy8xlgXInXlCRJkiRJkjQClVqMbCkswZ0AEdFQekqSJEmSJEmSRqJSi5HfiogvAhMj4t3AfwFfKj0tSZIkSZIkSSNNrxawyc5PRcQFwC7gBOAjmfnDAclMkiRJkiRJ0ohSUjESoFB8tAApSZIkSZIk6YhKLkZGxO8DnwCmA1HYMjPHl3ptSZIkSZIkSSNLycVI4JPAazPz4QG4liRJkiRJkqQRrNQFbAA2WoiUJEmSJEmS1BcD8WTkioj4N+A/gOaDwcz87gBcW5IkSZIkSdIIMhDFyPHAPuB3imIJWIyUJEmSJEmS1EXJxcjMfMdAJCJJkiRJkiRp5Ct5zsiImBMR/x4RmwrbdyJizkAkJ0mSJEmSJGlkGYgFbL4K3AIcU9j+sxCTJEmSJEmSpC4Gohg5LTO/mplthe1rwLQBuK4kSZIkSZKkEWYgipFbI+KPIqK6sP0RsHUAritJkiRJkiRphBmIYuSfAG8CNhS2PwBc1EaSJEmSJEnSbxmI1bSvBd6emdsBImIy8Ck6i5SSJEmSJEmSdMhAPBl5ysFCJEBmbgNeOADXlSRJkiRJkjTCDEQxsioiJh3cKTwZWfITl5IkSZIkSZJGnoEoGv4/4K6I+HZh/43ARwfgupIkSZIkSZJGmJKLkZn5jYhYAby8EPr9zHyo1OtKkiRJkiRJGnkGZDh1ofhoAVKSJEmSJEnSEQ3EnJGSJEmSJEmS9JwsRkqSJEmSJEkaEhYjJUmSJEmSJA0Ji5GSJEmSJEmShoTFSEmSJEmSJElDwmKkJEmSJEmSpCFRtmJkRCyLiEcjYlVEXN7L8fqI+LfC8V9GxIJCfGpE/CQi9kTE57u1Ob9+rBqVqvHvtPB4kvuxkXEzyLiwYhYGRF/ExFxmHYHIuKiojLvpkbPS6vy3nBdUVR6uZYlh7wfjhgRDxQ22iIgXFB1bWri3X0fEij7c8zMRsT8ifhMRDxf+Pf5iIu6LiIcK79x0RXPce/zlHueKiI0RsiMzmiGiPiKtnd5SFyMiqB30c+B/AEAD/DLwG2AJ8OaIWNLttHcC2zPzOODTwCcK8QPAh4H39XLp/wu8C1hc2JYN7N1LPUXE4og4u2h/UUQ8r5w9SRrZIqIqIpbHxDnl7kXSyBMR1RHxZIxcUu5eJEmSpJFuIIYVl6QvjxZKmgdzswqOxJBiGlfH1tYtC7LuJekDM+vYcURsBr4BXAm8G2iOiP/MzL8rZ2+SRp6IOAb4DLANuMm79yY9qDHhamAj8EBEzATmZ+bJZe5J0ggVEZOBe4EPAa9c9n4kjSiHhpaXuxFJI19EnA2cDvwSWJ6Z68rckiRJkiRJGuEGoqEoqWKw+i5IpwjP1JVoC1hEARceQ+Zn1IkqFuU5zJg8yZjxSoYhjE9bmZ2gqUfU1zStkz4K4i60QUiqKIsFo3UYzSUx3u4X6H6Q5yGxJszhOpbZGnS+T2VRVt5mT0k6ZkWmqfH2uqUSd1A20rpk4bV5GZn6MKZ75sP+mpuY7d9pzZ/oVpjX5R45Er7QqeO60lpj1zhP54oNGjy3ebT7vo3T3LVp4uNfwWf9rLuwVv7zPv0bPOMZa22/tfr4NP3sAHQ3sruUn7NzX3Zw2eeM4g+dmP9ZYs6PqhmA5+hT5eN8MjFBNsaIJqzOSN5rt7g2y4lwk+kR3dNbVmx3f2GmBnzNA9y6C7wvqqYIxsaD8LGi7C7DmrYCBTpWVAHt6DoxaAqyI6qv9OfGl1NSzXtVyOkttTYvkwnnzxDtfJr7J6bbvvOUuJeNW4+MbUNRoTcnPCAu6NoefCuHWAKoIhiNpLi6IJHTeGzvs5gn0qMZy+QcUJnQvUp1AAjJgn5QPJ+Ff/m8tpEJYGngHGHyfnsSrJ2ojK8Id12TeSp7lW+wNzSV7Fhh/xLFRJn8KOjiJf1Kzj1TVG0q/I06UfdYO9NOXsE7sHN/iinnDWP4JF19I2mopEg7ErIf0q5Emzhk4hp4mvs9R0XRmtrzUUV2c6amZvP+5P19HNwtHanHmtCgbyU2jj70T9mG2/lIe80Xw7qSLiiIHDn2vq4AgBoAIcfqn+Ej6lPpdIhZY4Mm+zGQIN0kDYtf8Bxh1cyxhVfDDq1/EG1jPsNwb08mPxzeLXxJajHqO2YZ/oKPX6aN8ZFVsAbmh+oHnlXzLVtlnJbGzbetpKe0Vqn4RSjabo1Nw4amQ7/dddQvcGMbnnrDr5R8O3G8vT+ZFTRm2eSv+DSNiOfHtEpz1tAXXxqeuDbwUsxfcdH7sbuIHs7MsFN6i/ywr2kCI4tMdbQuJ7fB44Z6exbMZsaGuRqnjx4MkDsJ1tCDDb2Y0M1ixfNWqCy1X1GAGQMBHL9wvm+xfqR3XPVc1TdaSBjJ52i4cDRIF9sb3drWxw6t29hTpnB1a+Uz6H90pX51cfuuhpA8ZVgJoYOyc+Ot6GGX8Gcqh/AWZmjLmK4MnqpSMjNBtCN8/kkLTHJ4s9RPU8M3eBTJQ+kLyyKQNAnAEmk+rv/vXdLbQvjhtBOMXzEUCvQwtTjX3fCbB2b0jSbxG+vxIwVCf2qOGGhqJJrP3/o7ZQ1hmALCnbQB7I5RNRtmHoP2/1dDlvsWlCOfjGQLMe42Ojwt/9aihoYzcRrm1q/tKTH3t88JqTf6M1IrwaJlfCaI7tPzzZXhpvvq6gNbbDVNGiRRnN2qt7aMT8Pm4Jtyw+dTO73/7AvtmHv70lyxfyPwvVjlGL9nj0/UwIKMQHEtORLwnmS4zd/qfbxQxH/bzdGEhf5Iw9y5SIGBuJzjSqNjnNmAdXbIq7/1eSa30mHrPCBSLQUNxhdHJKXZ82TIZf9uz3NFRFfc6nIXYIqCmm/MNLTs0Hw2uZ5TYyj8Mgeo06wMt1qL3Tq7bOnrWqMpmzYv6FnmJhCvnLn2bibbrDmfIJnmemL3ePTT4uQtdqmgfnl3Yy4UrPeOwy3fsupS0W6/BxD5jLGbHC20mtSIa9WXnmUAb5oGHrrDCNwVJ3rZt+eQT0+xqq0PmspYXNGNJwrYlRX61exkejhZ1L9wD0Yfo5W1Qhvvcqoyuj5KpWyQ7/q9ViTIakCWHI5pW2VCjxM5SZWRQ5Hd3dZBGz5VXd7mp0wPBDmTTrIL/nfMxcCqsXTNmQm91E4/bzvTMDjqjFdpXCGaSf4mn6a3ZQm6eOtWbXWxTvz4cX8A2HQbVwJzFZEsJNtHSxS6qXt3bV27SFPNSuWbycPj5o7ADYRQ2z6UGl7OjFqmZSOyK6zcNaqjWrd2FKaKNeIkiYgYyP5F5M6mzSwFxhHLkzs2T26zH8Cu9U4+9nxeKNvkH3hHmv5ftTRtJy2YqZ+UvCeJJS1CncBLEuMCgqvT3v8Ezz8EuqSKGZ0Ax9W2qFmGqnjYZXMRNM6WXvGw+E5kTYp89FGdwUIa3Pf/BDZSF+YIMqC4L+IpDqJ0sDmuBR2bKKqSXOTu2DS6L4LvqqxfhM4hiUVNtLOEM4o3o9xqzTp0Yh0CSiVRa+/Kt4YG+2QkeZWMT60XbI5Nnee2RU3K3/1qJ9zZ6X0kEEcpmfK7Z0zJ9aRXNSqzP3QK/d9OD2IuRiJVEEuidCn7gVt3Ay42EozePvh98AgqF8GRaYi3Kt+RjlAGHdTwn0G0v4fs0KpxmeKyEqeHPIRWvd8nCqFL5C1Mr/tT5PqdwyPm6vbnsvoLd63RtZH1gHqzeh0d5okpGqEQdzsJxS2JnJxBvZfqeVRxnz0bA6vp1pEO8iXwJVd3cAPWuVQ2kILpOGV56wVDdY0Xr9V1dzTYpLjWI/jwjSYTo2h7jNjXzq5H8TOEPfgjh7SDlzgvBWdE6uMWH99DB6MNl1t5XHJIJY8K3XpcfgzjejYZmxZ4pYvBWk9HgwDMBOlgJU0eqvTHd5FbtiQtc5hj+X8j/ibVe9/tVX8zzhRa0jjfhM0dLcFM1wF0rwvEWzcnNJSqQRK3Wj8Hi4nAbdGI3uuFyLeq0tvpbXcXodkKz9ckLumS0hNQH5O3yOuFRbT/SmjoEdhsinEDNQT9XwL8Uv2/vEywkV5ivkHDZ/WmpnwQGjVTyrBFxO1IIkq8G8l8bdyTNemd4HNTS8T/fWzgFjf50ksN+pTeX06mQXs6VMmXCuvJw2Zu2xXL6Wl5EjrTVnspCuxfwqMOBgdqvVWjmyRFdjuscRhDoaPW4F8ubP1Pi7e4cwlsNOSYH06d4Zu9AIgaVeB0zNVNHBvXxmGoKQgXYmzdCXF+hS/H4LyKG/QRwWMyt/+e3SWe2vuK4nBImh0DbMI7dh4f/VaRpIdHEc4PeXfs3jYJ2l/2Uy5FZ0hjoGbEoBW0Q2Rq5zKCs9+qiJlP2xlF+3ZmTl11YZ+XQcJZm9vQSN2KYVlQJ7B4/eh9bW5SHYWlMWJ6UCEbcmuOLwl3hRGRtXlJ1NJdy/yvXQWYhWp2Ey2nxJJmBpi/mvQx/IhSjVGpGjfrJhnZwYKk33PD+GxpajlaOBYymA/w/eWrM/bbUgwQ5K0LtP1uHuhA96XsI0a1ADfRlSq4aKQD5f5ZWDjPImfLBDaoEZiXL4sthbVyTRVKVs0wuyi6Hjh9/bl7NhACoE9OFoxCVoI+ZfBjQvJB4Y1c0u9AHKTmS6gsI4DJjr0PlJhqjIDSVThE7IWVMAqIYqqQZcLoQOB4hRVlgNqRvfaa+vw+Ct7nJbkfuUjPfu5uzR0RL1J6Vb85cFl5UoP0Eo8P4a2yhUY1z3/1ZWw4hVPvzLDK3NPTxoFgoJ3H6EdR4XBgrx36f72pFRB5Ck9hnhoqU7fsjWyDtf6f8YnF1cOaLwyU4D2Udr+WtXBDupkvvV1vLYh2WfXrl7nzjELpL6Wq/wkJMPqjCXl/T5OLqbZjR6wSrcyhO8iPCZnu5tYjF7P2zFW+zU7J4cQlXQfiUbz/bv3YfM6jh9YgrPbmQJFMcq4Z5S/AzPE7UlxPlcjZMRzv6ThJCJRNuMTeExyR4OSvIzlxCKx3o0c3Un5+sXtR9ib3qf+vZjG0WM+ILwOQ6kn0U2Nq4jPNvZUHBbimbJF+g3hq6v2YXqUG3u4ZQnDMAjMIpHpxw1bCNJjhXXXRi9pW4eXPiRCHFm8SdzNX4Vq5iFE2ZzZFnvkZ7X4WAWNQfH8qu7SCBjqfAx9RwITpwyS5y5wyKjMiPEbM9PPt6yfgV+KF+MpAvVXyHjWf6xvVNWKoTNmhuGApYN0O+LSYMd7C4zPUuvOahUMXxnyGu+D+Yw4R8bqNnNeNu94ExqvyUw8iYlxgV0GSPnHvCRfh2U8X30hX9vdQrdB3kuf9Q7M2t0j9RV4wM5T6/7rvLCZxI9ZcxBQABqwSYSvRuEMVOOVEWMPF1qzmGcozgMpdjXEGJ+7Fx5BZBiC+iqP6CN82TQmNVeLtJwCrQ6wXcKGOw3tbv6zZgTcRvN1V9UJmHqvbK2ip6s2BJGrdjJ7E7TR7KBRtqP9N2Tf4XqxvO0m6VYpz6XnTFWqsT7d3xqUEOzzXmNZLnzEnUSXkEkBXg8fhfTjvDvLXOEpgbxBQcELeyI0mIhy3fs5MHyIz8wBY8hbVAFy3LjImbVD8FeEnYP7vWPVj8eiQ5wvemuxs9FmXDEkTavs4eHgz/RyKp0B8GnGpnkamkJ/RyQqvVdzjFlG0tUhz9K1EmeTuZfibEHNJ8zdRukpTDuCp+ucNmTn3V4JSxE9WmFgyuTBmJ6SSR0FGQhEI7n7fb2E6whWQ+ELnWsqhC3xyX/jzgEc7LvIAIjLfRGRC3LOFnjKhxT4SG9IqNa3Oqx5AHnKJoIKkaSJKkSJEmSDK3

HxEBJ3Fyx8DZGp9EQcAACAASURBVOamiNgBLAV+1d9kSnoyMjNvAF4PbAQ2AK/PzG8codl6YG7R/pxCr
K/fc33h62rgpxxmWHhmXpeZSzNz6bRp0/p6eWnI2Ec1HNhPNRzYT1Xp7KMaDuynGg7spxrpCoXILwHz6
Xzobz7wpUK8FH0ZpXzonMxsA3YCU4BfAxdGRE1ELAROp2td76uFIdofLhQvj6jUBWzmAXuAWwrbnkLst
1kOLI6IhRFRB1xcaNuX7zcpIuoLr6cC59C1iitJkiRJkiQNR9cATd1iTYV4uVxPZ/FyBfAZ4C6gvXDsLYXh2+cWt
rf25YKlDtP+HpCF143AQuBR4KTDNcjMtoi4Dl2LgNqAauz8wHI+JqYEVm3hIRZwDfASYBr42Ij2bmScDzgC9G
RAedhdSPZ6bFSEmSJEmSJA13h3vAr9R5CfoySvngOesiogaYAGzNzATec/CkiLkHzUzMgvvtrT2kLgLeLeAy6jF7eHRE30jkc/IYjJV
NSMbJQ/TwkIk4D3t2HdrcCt3aLXVn0ejmd/zDd290FnNw9LkmSJEmSJA1za+gcmt1bvBSHRinTWXS8GOg
+9PsW4G3AL+hcE+bHmZkR0QQREZu6NiAuAtsx8qFCwnJiZWyKiFngN8D99D99SabUJyO7yMx7I+KsgbymJEm
SJEmSNApcQeeckcVDtfcV4V4v3Wl1HKwFeAb0TEKmAbnQVLgOnAbYVRyut5bih2fSFeW7jm/xRyP6KSipER
8d6i3SrgNOCZUq4pSZIkSZIkjTYnv/uSG1d+4UYY+NW0+zJK+QDwxl7aPQWc0Et8L52L2Ry1Up+MHFf0uo
3OOST/vcRrSpIkSZIkSaNOofBYvcGxkpU6Z+RHByoRSZIkSZIkSSNNbqcvGxkpU6Z+RHByoRSZIkSZIkSSNbqcO0jwfeBywovlZmvry0tCRJkiRJkiSNN
KUO0/428M/Al4H20tORJEmSJEmSNFKVWoxsy8x/GpBMJEmSJEmSJEmSJI1o/SpGRsTkwkWsTkwsv/ioh3A98Bmg8ez8
xtA5CbJEmSJEmSpBGkqp/t7gFWAG8D3g/cVYgdjEuSJEmqABGxxLCIejjYhVEXF5L8fPi4h7I6ItIt5QFD8
1In4REQ9GxAMR8YdFx74WEU9GxP2F7dS+5NKvZJymCPM/2kmSJEmSJEmSpkHNF0AOmhGsb49vMVyx8Bt
DRaWuAS+lcqLrYPuCPM/PxiDgGuCcibfPM/4O0cibsvMHYXwAJcC7J
kqSj80dnvesS4BpgHp0Fwiu+zvcmsmcCqzJzNUBE3AhcABQXIy8APlJ4fTPw+YiIzEzgL4GTSs+kq
wg37q7zDtLwIthSTPAz4O3AO3ADsBK7rbzKSJEmSJEmSJEnSSaFQoRH4JmA9E4euxBwBNtbKbSJEmSJEmSNFfpdAzR1izUV4V4v3Wl1HKwFeAbwBvz8
yDT09+EDgROAOYDHygL9fqdzEylg4O8X64F5RftzCE+iYjiyPjGWXPeAD2X
m3QfjmflsdmoGvkrncPAj6m8x8l+B2yPiP4H9wM8KyR1H51BtSZIkSZIkSX235ijjfbUcWBwRCyOiDrgYuKU
vDQvnfwe4oftCNYnxY8JY9n9vK2D8d7XVv1Ef5p7x2NiVMPjT5/cIFbmNGZM5hyY5QfXWnUg4O8X7PrwNMW
tdbx5wdvwJMO8JbgcRkvVkrfXW5Xa5LD5LdzPzZpYXZYLMNJDzhWdtY6eYLX5kfBxcHLxXBZGDgw2TYMjLXKgDm8
i7VG5gEDG0dkP6v9yVGvkP6aghsXq80eOJSBt6fSUdDnJ+3gxJDgpPIwzQn8Jld9tQG1V/3X7n4bHnr0GyzpuiDuUh+XqsrMQ8l2rtGJ9r7J
Jp95Dq4scyi2KP9XauJEmSJEmSpMP75i+vu/GPznoXDPxq2mTmrcCt3WJXFr1eTufw7e7tvgl/cn
F+R0mSJEmSJKkCFAqPJRcfK1l/54yUJEmSJEmSpKNiMVKSJEmSJEnSkLAYKUmSJEmSJEmSJGlIWIyUJEmSJEmS
NCQsRkqSJEmSJEmSJEkaEhYjJUmSpBEsIpZFLu/l+HkRcW4Ej4wvx+yPiwYj4s6Py6+
7CNr0vudQMzFuSJEmSJEmSJEmSVGkiohq4ipJEmSpBEsIpcTFA5NLuFWjIMRsSoilu/l+HkRcW4Ej4Wv
9LZq44mnwsRkqSJEmSJEmSJEmSpCGn4VxXUYvfhA4euxBwBNWcBXaGo6RcHP2ajLYXFcWzqeY7y1vtr/MZwSNXYW+AQJz
M1uKdusZgFHWDtOWJEmSJEmSyqQiPwSMB+ITJDkIJQKxeVbAzFHVdXGe7XiESqfbxYyIoFSmPFFmkFTsIZJQeZhsSRZJaJ2D
bUemFu0P6cQOyqFJyJ/Q2fhkcxcX/i6G7iRzuHgR2QxUpIkSSSq/NUcZ76vlwOKIWBgRdcBSfGRgdRcDFwC19aRgR
cyKisfB6EvAS4NGIqImYV4LfAaOguVR2QxUpIkSSSq/K4B93WL7CvF+y8w24DLBuNuBh4FuZ+WBEXB
0RFwJEkBkRsQ54I/DFJ+lJkJkSLSsQ54I/DFiHiw0Px5wC8j4+Op+0/FJf8nE1bUmSJEmSJEmSJKnMHj69
htPmf9SGPjVtMnMW4Fbu8mqh4eE
1JkiRJkiRJQ8JipCRJkiRJkiRJkqQhUZFzey/HzIeLeiGiz1tbeX4I4HJVRFzey/HzIeLeiGiz1tbeX41lI
P9kdVquzooL21tdxpSNKI1dHeTkd7e7nTkI6oo63Nvqoh097aSrZ3lDsNSb/FkM8ZGRHVwLXABcA6YHlE3J
KZDxWdsWtga4FHmtaE7imH3MdRfGBgG4HIhw/T3trKxBOOo3HmdKrr6obi20tdZEdyYMt
WdjzyOO0HDjBh8SKaljdJdX19uVOTaN6g+g52Pr6Z523bGzp/D2LlzqpbBGSAz0NZB+AaMN
THzeYhqnT6OqxungVVnam5vZ9+xGdj72BNUDUNCte0/wN71z7D7iaeoGTuGisc
spmHq5HKnJakX5Xgy8kxgVWauzswFWcbgouITMvOpzHwA6A6P7njFcBP8zMbYUC5A+BZUORNMCBbdvZ
cPtd7N+0mZbtO9h09wr2bdg0VN9e6e6Qj5+3aevf3n3N7N+wkZ7Ydo9m8/D72rnu23GlJtO7Zy7N33MWep
Qums321c+zLbfPOwTvJI0QA5s3srGO++mees2mrduY+Odv+TA5qq3tp2bGT/Rs28uztP6
d5+5A8R6JRJjPZ/eTTbL33AVp27mLf+md59vY7Ad6xs9ypSepFOYqRs4G1RfvrVerCrEBbRsRs74qIFRGxvPmzf
1KtLv9Gzb2iO185HE6Wv2AraNXah89sGUbZHaJ7Xj0cdqbWwYqRalf/bRl1y46uvXDvWvW0bZ332CkKA3
KPV8aSAPdR3c9+VSfYtLRGOh+2t7Sws5HHu8azLRwrpIcrp+27z/AzkdXdTk32ztosRgpVaQRu4BNZZl6XmU
szc+m0adMG5JrRy9Yq2CXqoOFhxmoH0tUnoPp7006jq5dZVSeVeXPSg2awmnoYGJp+8pUoaQRdVoCdVW
1tn2LS0Rjwn6URvX9+uWvmDV3WKmvDttPq4Ko6dm3evEpVZLeP/zPXA3T1E1R6vYRwZ1Ktf0qmzMnlbvZKmVmHe9LTXdgxdfWvGJa6vpsrmVuqwgKSHiF
G9FoWkwdYwdXKPDx6TTnoe1XV+GFF51U0YT+3ECV1iE09cTO0Y54yUpIEwfuH8rn98jGDcwvnlS0jqRXV
tLZNOOrFLrKq2loZpU8qUkUaymoYGJp+8pEusuqGeukuaymoYGJp+8pEusuqGeukkTDtNCUJmVY5br5cDiiFhzYHxIZyHxYuCSPraInlYlZ
V9n8H+ODAp9i7+kkTOeb8c9m3YSMdla00JpZJW5R24oDYK6iROYdf5L2L9hI3+NLTTNnSNF/VEVoKax
kZkvPoP9GzfTvTvHMXTdOnFSar9y/TkjQnQ6qdM5piXn8u8eGqnEGGMaa156Dvs2bqS6k57kbEdKS6
vo7GmTOon2hxSIOjafYsZp57Nvs2bKRmTBNNM6ZTZ1EkTNSv3eOCdnOS1IshL0Ey4z4EEzYqIaDy+G
XlLRJwBfAeYBrwBMtKTbTOopnTnOctTRrSmnKbzIMsEB85tA3ppUO3YsTPNTDvejxnDKc4NefX
SRqRIoKGKZNpmOlIqsapsVTU1NM6YRuMMp9DQ4KuuraVp1gOaT0T0aSmbcCt3aLXVn0ejm
dQ7B7a3s9cP2gJihJkiRJkiRpwJWlGFkJsr2d9pZmKC6vp4Ihw+q8nS0ttLR1kpU11Bd1fudKQeMpOOlma
yo4Oqunrn0JWkfmpvbSHb2qiqqaGq1nu+Kk9m0t7cDOk9X5Wro72NjpYWoqqKqrp6sUzSyvsU9pYo0KouR7c
3N7Nuwjtad24GgdtYGXD0GqbNpKrGhT9UOvrm8bvmifpaG0hamoM3chtWPHe0NVxehob6d52xGHstVxm
mdSMGcuY2fOpbmgsd2qSqNKy07qSNKy07t7FnrVPkm2tZEcHLVs2s3/L5lfzUmjTVLcXSFSLtQ5qBRrgdS3ZstmTU1bzNzsj9t9MGfUAIUYbHaOHTSkzLMK1fUO5

U5MOaTuwn73rnqJ9316IKhpnzaF+0mSqqkdl2UOqaKPyccCWndsKhUiA5MDmjbTt2V3WnKRi7S0t7Hl6
NR2tLQBkWxt7nlpFe/OBMmcmPad93172P7sWMgFo27uH/Zs2kB0dZc5MkoaP9uYD7H56FdnWCkC2tr
Ln6Sc6n0CTKkTb3j0c2PjMc/f83Ttp3raFLOxL5ZYd7ezf+ExnIbIzwP5n1tC+f395E5PUq1FXjOxob6dlR881b
1osRqqCdLS2HPpQckjmoeKkVAnamnv+cte6awcdbW1lyEaShqeO1hbo9kecbG/3nq+K0nawwFOkZec2sr
29DNlIPXW0tdG6a0ePuA9zSJVp1BUjo6qK6qaeK7zWNDqsUJWjqqYGepnH1CEGqiTVvcxpVt3YSDiHlCT1
WfR2b48garznq3JUN/Qcjl3TOIaoGnUfJ1Whorq616mCqmqdik2qRKPu7hERNEyZRhTND1nd0Oi8PKooV
XX1jJkzr0uscebsXn8RlMqlpmkMteMmPBeoqqJx5hwntJeko1Bd30DjMXO7xJqci08VpmbMuC4PdER1D
Q3TZ1qMVMWoqq6h6Zi5UNQna8dPpKaxqYxZSTqcUfkn15rGJsYfeyLtzfuJCKobGl21UBUlIqibMJnqhkY6
Wlqoqq2lur6RqLLIo8pRVVvHmLkLaD+wn2zvoKqhgRo/PEvSUYmqKhomT6W2aSwdrS1U1dZR3dDognW
qKNV19Yybf2znPT87qK5vpLq+vtxpSV3UjhnH+OOeR0dzM1FdRXV9o09GShVqVBYjAarr672BqqJFVRU1j
WOgcUy5U5EOq6qmlqqx/pInSaWIqmpqmsYA3vNVuapqay3sqOLVNDRCL8O1JVUWn6uXJEmSJEmSNC
QsRkqSJEmSJEkaEhYjJUmSJEmSJA2JyMxy5zDoImIz8PQAX3YqsGWAr1mKSspntOeyJTOXHU2Dbn20kv7
9jsRcB8dg53rUfRR+68/S4fRvOxB8v0NjoPtpXw2X/77DJU8YPrn2J89S7/kDqZL+nc2lp+H8s7RS/g2PxnDM
GUZv3uW65/dFJf03MZfDG4p8+tVP1btRUYwcDBGxIjOXljuPgyopH3MpzXDK2VwHx3DKFYZfvqXy/Y5sw
+X9Dpc8YfjkOlzyPJxKyt9cKjeP/hiOuQ/HnMG8K1ElvTdzObxKy0dH5jBtSZIkSZIkSUPCYqQkSZIkSZKkIWEx
sv+uK3cC3VRSPuZSmuGUs7kOjuGUKwy/fEvl+x3Zhsv7HS55wvDJdbjkeTiVlVL+59FQpefTHcMx9OOYJdjbjkeTiVlL+59FQpefTHcMx9OOYM5l2
JKum9mcvhVVo+OgLnjJQkSZIkSZI0JHwyUpIkSZIkSdKQsBgpSZIkSZIkaUhYjJQkSZIkSZI0JCxGSpIkSZIkSRoS
FiMlSZIkSZIkDQmLkZIkSZIkSZKGxKgoRi5btiwL6eh2o6Ro/y+lsxyL/Z58Dqd/TBcD41c4sHiGQ9391G2It36xn7o
N8dYv9lO3Id40gEZFMXLLLi3i3lTkH6reyjGg7spxoO7Z7KeqdPZRDQf2UBwUxUhpaDnjCTeyNVWsuGZjax9+hnGjG1i4bHzaWxqKHdKUhetLa089eRatm3dwcxZ05m3YTDYRUe60pC527tj
FU0+sob2jgwWL5ysRypyT1sH7ts6xf9yzjJ4xnwaK5NDTUlzslSRp2tm/bwVNPrCWqggXHzmPlmn
I7Nu3n6eeWMPePfuYO382M4+ZXu6UphMVLqo4dWPspl77icLZu2AfDW//Um/uSytzJx0ui5oaqyNTe3
8J/f/j4f/8hnaWtrp2lMI5/6p6s556Vnljs16ZD1a5/l6is+yS/uWAHAHAklNO4OOf/TALFs0tc2bSc+5bsZL/884r
2LljFxHBu9/zdv7onW9kzNimcqRPo2rPvFXzJk3q8yZDb4d23dy3edu4JtfuR
mAadOn8LnrP86Sk48vc2ZSZSjLMO2IWBYRj0bEqoi4vJfj50XEjf50XEvRHRFhFv6OX4+IhYFxGfH5qMNdrt3bOPOPT
/3tFw4VIgG+8eVvG8Vv8dBvHi1jVlJXqx9/io/99SYZ9T/e/XzoPR9jwzMby5yZ77Jy77lh+qBAJ8NdW
MmYkdbVj204++oF/YOeXQBkJtf+4/U8+/tCqmMcmScPLf3KPxQ4VIg/uute7vzp3p3WXMaOg8tPKxQ4VIg
M2btvLpv/sn9u3dV8aspMox5MXIiKgGgGrveDSwB3hwfRS7qdtga4FLjm4jnHhHpRm7njl3c3ct2jl3ct2Jlj/jGZ
zaVIRupd5s2bCEzu8S2bd3B1i07ypSR1NOKu+/vEbbVzp7+ktaW1tHnHx+4YXMZsPGk4am
9vZ2f/aRn4fHuO+8pQzZDr7eHAe5dvpKdO3aXIRup8pTjycgzgZWZuSozW4EbgIsK3lOZjOjrncSg5IWBAJxCje+OIOB
2YAfz3UCQrAUyYNJ6lL3phj/isOTPLkI3UuxmzplFV1f2H/U79iVNrEVcyrXKc6itqy1DRlLvFi85tke7UuyOzbDZr/NlJP
k6ZMZPGJx/aI5o9owzZSNLwVF1dzfmzV58ma4NjCGKzxxYjwtKCGbdH+ukLsi
CKiCvgU8L5ByEs6rDFjmnjvFX926INIVVUVf3LZH7Hk+c75ocqxaPF8rvr7v6Kml+c75ocqxaPF8rvr7v6Kuvg6AcePHcs1n/poxY8cA0DSmkZvuOf
Xj7HOX8opXnXto//QzX8Cy155fxoykriZMPM0kaXl75uy/ljBefdm
j/pa948agpRj7v+cfzzne/5dCDArPnzuIvLn+XC6BKBdF9SN+gf8POOSCXZeb/Kuy/FTgrMy/r5dyvAd/NzJsL
+5cBTZn59xFxKbC0t3tn9xFvVo3rx5pz/9dM/hNtLR2rxxK2vXPMPYsU3kLX1sH9VgaG9
v5+kn17F96w5mHjOd2XN7nSC8z8tr2081GHbv3sOaJ9fR7B/IVzmND7ypr2U5XVhmc2sX7dBiZMGMv
8RXOpre316V3v+ap0/ixVWe3auZunV68lqqqYv3AO48aP7e20dlPm5tbOlfT3rufufOOYdqMaFm5PmbOlmKeVOSaXpc
z/VkZWjGHk2cFVmvqqw/0GAzPy7Xs79Gl2Lkf8CnEvn8QB3whczsShOaQ1L1NK14A
2UQ2xft1I7acaYvZTDQfe81Xp/Fmq4cB+quHAYuQAqinD91wOLI6lhcB64GLgkr40My3Hxd9GTkby1ES
pIkSZIkSaoMQz5nZGa2G4j87aB8e5HhQHpG6ZncSDQ52nJEmSJEmSpIFVjicyczbgVu
7xa4ser0cmHOEa3wN+NogpCdJkiRJkiRpEJRjkiRpo5DFSMlSZIkSZIkSZIkaUhYjJQkSZIkSZIkDQmLkZIkSZIk
KSJEmSJEnSkLAYKUmSJEmSJEnSNCQsRkqSJEmSJEkaEhYjJUmSJEmSJEnSNCQsRkqSJEmSJEkaEhYjJUmSJEmSJEnSNCQsRkqSJEmSJEkaEhYjJUmSJEmSJEnSkLAYKUmSJEmSJEnSkLAY

QArfnofP/jXH9He1k7z/mZu+vy/88j9j5c7LWlAPb5yNTd88ib27z1AR3sHP/7OHfzse78od1oSAPv37Oern/
gmD654BIBtm3bw6fd/gbWr15c5M6k0mckd37uLn/znz+ho72D/3v18/R/+lcd/s7rcqUnSkNq7ey9f+tgNP
HLvYwBs3biNf3zftaxf/WyZM1M53PezB/juN26jrbWNluYWbv7n/+Shex4td1pSyfpVjIyIsyPiL4FpEfHeou0
qoHpAM1RFaGlu5Y7v3tUjfv+dK8uQjTR4Hr2vZ4H9zu/fzZ5de8uQjdTVts3befT+VV1i7e3tbFi7qUwZSQNj
z6693NnLH34eX/lEGbKRpPLZtmkHqx96qkusva2dDes2lichlU17ezs/+17Pz+ArfnJfGbKRBlZ/n4ysA8bSOc
x7XNG2C3jDwKSmSlJTW8384+f2iM9eNKsM2UiDZ/qcaT1icxcdQ31DfRmykbpqaGpg3MSeU2OMGz+m
DNlIA6e+sY7Zi47pEZ82a2oZspGk8mlsamDM+KYe8XFOjTXqVFdXs+DE+T3ic4/rsdavNOz0qxiZmbdn5ke
BF2XmR4u2f8xMx+2OQFVVVVzwxvNpGvfcjXHaMVN5wdnPL2NW0sA78bTjmb3wuSJ7Q1M9r33bq6mt
cxEbld+UGZO59K/e0mXxsBe/6kx/KdWwV1dXx+ve8XvUNz73h585x87mhFOPK2NWkjT0ps6awtved0m
Xe/25rzmbOcfOLmNWKpeXXfiSLms0TJ4+idPPe0EZM5IGRqmfrusj4jpgQfG1MvPlJV5XFWjBCfP46FcuZ+
0T66muqWbe4jk+saARZ+ac6fzVZ/5fnn58La0tbcxZdEyX4qRUbqef9wI+ev0H2bB2I+MnjWf+8XN6fVpSG
m6Oe/4irv7qB1n3xDPUNtQy77i5TJ05udxpSdKQO+P8FzJzbue9fsLkCcxbPIexjoIYleYfP5ervvwB1j6xnqiq
Yt5xs5k+u+dILmm4KbUY+W3gn4EvA+2lp6NKN2v+TGbNn1nuNKRBNWXmZKb4AVgVqqa2hkVLFrBoyYJ
ypyINuNkLj2H2wp7DtSVpNKmtq/Ver0NmzpvBzHkzyp2GNKBKLUa2ZeY/DUgmkiRJkiRJkka0fhUjI+LgI0P
/FRHvBr4DNB88npnbBiA3SZIkSZIkSSNIf5+MvAdI4OCsuu8vOpbAolKSkiRJkiRJkjTy9KsYmZkLBzoRSZIkSZI
kSSNbSXNGRsTrewnvBFZm5qZSri1JkiRJkiRpZCl1AZt3AmcDPynsv4zOIdwLI+LqzPxGideXJEmSJEmSNEKU
WoysAZ6XmRsBImIGcANwFnAHYDFSkiRJkiRJEgBVJbafe7AQWbCpENsGtJZ4bUmSJEmSJEkjSKlPRv40Ir4
LfLuw/weF2BhgR4nXliRJkiRJkjSClFqM/N90FiDPKezfAPx7ZiZwfonXliRJkiRJkjSClFSMLBQdby5skiRJkiRJkn
RY/SpGRsSdmfmSiNgNZPEhOmuU4wckOw1b7S0t6fDo4gAAIABJREFU7N+0jZZde6kZ00jjtEnUNjWWOy
2pT5p37mb/pm1kezsNUyfSMGUSEVHutCQADmzfxYEt28iOpGHKRBqnTip3StKQaDvQzP7N22jdvZfacW
NonDaZmob6cqclSSXrcm+fOonGKRPLnZI0arS3tLJ/yzZaduyhZkwDjdMmW7sYAv0qRmbmSwpfx/WnfU
QsAz4LVANfzsyPdzt+HvAZ4BTg4sy8uejY24C/Luz+bWZ+vT85aPBkewdbf/M4G+/+9aHYpBMXMeuc06iu
rytjZtKRHdi+k6f+6ye07tkHQFRVsfDClzPmmOllzkyC/Vt38OQtP6J9fzMAUVPNooteQdOMqWXOTBpcH
W1tbLnvYTbf99Ch2JQXnMiMs06huqbUWYckqXwObN3Bau/tUllkJtsfWc2zd95zKDb+2HnMPu8Mahr9g
+dgKnU1bSLiJRHx9sLrqRGx8AjnVwPXAq8GlgBvjogl3U5bA1wK3Nit7WTgI8BZwJnARyLCR0IqTPOu3Wz6
1couse2PrObA9p1lykjqu73rNx0qRAJkRweb7vkNHW3tZcxK6rT76fWHPqwAZFs7W1c+RnZ0lDErafA179j
dpRAJsPXXj9CyfVeZMpKkgbHrqZ739i0PPOq9XRoCLbv2sOHu+7vEdj2xhgPbXI95sJVUjIyIjwAfAD5YCNUB
3zxCszOBVZm5OjNbgJuAi4pPyMynMvMBoPtP4FcBP8zMbZm5HfghsKyU96CB19Ha1uvNs6OltQzZSEen
de++HrGWXXvpaLcYqfJr2bmnR6x5x246p3CWRq7D/Q7R7u8Wkoa5ll097+0tO3eTHd7bpcHW0dpG9vL
QibWLwVfqk5G/D1wI7AXIzGeAIw3dng2sLdpfV4j1RSltNUTqxo2lfvKELrHq+jrqJvRrVL80pMbM7jkce8pJi
6lxigFVgPEL5/SITT7pOKqqq8uQjTR06saPpXZsU5dYzZhGf7eQNOz1em9fchxVNd7bpcFWO66px5QIVTU
11E10GZTBVmoxsqWwonYCRMSY0lMaGBHxrohYERErNm/eXO50RpWaxnrmXXAO4xbOJqqqaJo1lQWv
eRn1fmDowj5amZpmTGPuBS+mdmwTVXW1TD/j+Uw4bl650yob+2llGXPMNGaffxY1TQ1U19cx80WnM
n6+f5Ozn458tWObmP/q8xg7dxZRVcWYOTNY8Lsvpa5bgbJS2Uc1HNhPy6PXe/uCngVKdbKfaiDV1Ncz+/
yzGH/cXKK6isbpU1jw2vNpmGQxcrBFKUO7IuJ9wGLgAuDvgHcAN2bm535Lm7OBqzLzVYX9DwJk5t/1cu
7XgO8eXMAmIt4MvCwz/7Sw/0Xgp5n5r78tz6VLl+aKFSuO/g2qJO1tbbTvb6a6vo7qutpypzOUjnrZZfto5
Wndd4Ds6KB2TONIXEm7X2/Iflo5WvfuJzOHTSGmn+yn6qG9pZX25haqG+qorq2I3y2856vS+bN0mBgl9/
bDsZ+qrDra2mjb30x1Xe1vW3R3xH0oLKeSlh/MzE9GxAXALuAE4MrM/OERmi0HFhcWulkPXAxc0sdveRt
wTdGiNb/Dc/NVqsJU19RQPc4VLjU81TY1lDsF6bBqxzSWOwWpLKrrakfbHzgljRLe26Xyqaqpoc7axZAq6V
87It4J3JGZ7+9rm8xsi4jL6CwsVgPXZ+aDEXE1sCIzb4mIM4DvAJOA10bERzPzpMzcFhF/Q2dBE+DqzNxWy
nuQJEmSJEmSNDRKLf3OA74YYEQuAe4A7gJ9vl5v2/rVFm3grc2i12ZdHr5UCvE2Vk5vXA9SVlLUmSJEmSJGn
lbSATWZ+JDNfdSJEnqotRh2n8NnAOMBe4D3kdnUVKSJEmSJEmSuih1mPbrgTb
ge8DtwC8ys7wgVgPXZ+aDEXE1sCIzb4mIM4DvAJOA10bERzPzpMzcFhF/Q2dBE+DqzNxWy
nuQJEmSJEmSJEkJEkaQQqtRg5JTO/ArRm5u2Z+Q7ApyIlSZIkSZIk9VDSMG2gtfD12Yj4PeAZYHKJ15QkSZIkSZI0
ApQAvajP6SsSIkSZIkSZIk9VDSMG2gtfD12Yj4PeAZYHKJ15QkSZIkSZI0
DyEq8pSZIkSZIkaQQqtRg5JTO/ArRm5u2Z+Q7ApyIlSZIkSZIk9VDSMG2gtfD12Yj4PeAZYHKJ15QkSZIkSZI0
ApVajPzbiJgA/CXwOWA88J6IkSZIk9VDSMG2gtfD12Yj4PeAZYHKJ15QkSZIkSZI0
AQiUWozcGxFT6HxikYh4EZ2Fw8FyJp3FzmOAhcBfRsSi3k6MiHdFxIqIWLF58+ZBTEnqH/uohgP7qYYD+6k
qnX1Uw4H9VMOB/VQaGUotRr4XuAU4NiJ+TueiM39+hDbrgblF+3MKsV7PKQzJnkDnQjaXAD/4/9m783i
977LO/6/rvs/9/Z+TpE3aNKVLWqAtpQ0tBSiLAlJm
gh1mBEYUSgMUStKmTdMtadKc7OvZ7vv6/XHuhJOzJCc5595OXs/H4/vIfX6/r/l/9/Z+TpE3aNKVLWqAtpQ0tBSiLAlJm
gh1mBEYUSgMUStKmTdMtadKc7OvZ7vv6/XHuhJOzJCc5595OXs/H4/vIfX++y3l/kyvnvu/r/i6ZOZiZu4F/A
daN90My847MXJeZ63p6es5ur6QasEbVDKxTNQPrVI3OGlUzsE7VDKxTaWaYUjMyM78LXAc8H/HF4/hF4GmZ

+YMzrHYPsCYiVkdEG/BGhhuaI90J3FB5/DrgnzIzGT41+yUAETELeB7wwFT2QZIkSZIkSVJtTPVu2u8EZmfm
psz8ITA7In75dOtUrgF5E8M3vrkf+ExmboqIWyPiNZXFPgosjIitDB99eXNl/PbKz9jEcFPzLyfR/JQkSZIkSZLU
AFqmuP7bM/P2E08yc39EvB34s9OtlJkbgA2jxm4Z8bgPeP046x0Zb1ySJEmSJElS45vqNSOLERENnkREEWi
b4jYlSZIkSZIkzUBTPTLyH4FPR8RHKs9/sTImSZIkSZIkSaeYajPyN4AbgV+qPP8K8BdT3KYkSZIkSZKkGWhKzc
jMLAMfBj4cEQuAFZlZmpZkkiRJkiRJkmaUqd5N5+2sR0v2R0NV1pRH4H+POIuG16okmSJEmSJEmaSaZ6A5u5mXk
I+Bng45n5XOClSZIkSZIkaaaZajOyJSKWAW8A/uc05JEkSZIkSZI0Q021GXkcrBewNTPviYiLgLYemHkuSJ
EmSJEnSTDPVG9h8FvjsiOfbgJ+daihJkiRJkiRJM885NSMj4tz8w8w8i4k+BHD0/M9815WSSJEmSJEmSZpRzP
TJyc+XPjdMVRJIkSZIkSdLMdq7NyFdGxP7M/OtpTSNJkiRJkiRpxjrXG9g8Py4tHg0Iv4gIp45naEkSZIkSZIkz
Tzn1IzMzP+RmT8OXAfsBT4WEQ9ExHsj4rJpTShJkiRJkiRpRjjXIyIyMByMzHMvMDmfIM4E3Aa4H7pyWZJE
mSJEmSpBlSs3IiGiJiFdHxN8CXwa2AD8zLckSkSZIkSZIkzSjndAObiGh5SuGSlJkiRJkiRJk1WXZmR
ErI+ILRGxNSJuHmd+e0R8ujL/7ohYNWLeMyLimxGxKSLui4i4iOWmaXJEmSJEmSdG5q3oyMiCJwO/BKYC3
wpohYO2qxtwH7M/NS4DbgA5V1W4BPAO/IzKcBPwEM1ii6JEmSJEmSpCmox5GR1wBbM3bZg4wfCfu
60ctcz3w15XHnwNeGhEBvAL4QZ+HyAz92ZmqUa5JUmSJEmSJE1BPZqRy4EnRjcfxZkpMHAIOAgu
By4CMiLsi4rsR8es1yCtJkiRJkiRpGjTbDWxagBcB7ySbBcCP1f586cj4qXjLRgRgRN0bExojY2NvbW8uM0qRYo2oG1qm
agXWqRmeNqhlYp2oG1qk0M9SjGbkDuHDE8xWVsXGXqVwnci6wl+GjKP9FzU7JzGPABuBZ4/2QzLwjPDx+GQ
dl5rqenp5p3gVp6qxRNQPrVM3AOlWjs0bVDKxTNQPrVJoZ6tGMvAdYExGrI6INeCNw56hl7gTeUnn8euq
PmZnAXcDTI6Kr0qS8Nw56hl7gRuqDx+HfB
uWZOb+iPgjhhuaCWzIzP9V632QJEmSJEmSdPZq3owEyMwNDJ9iPXLwGP4tF4GOZuSkibgU2ZuadwEeBv4mIrcA+hh
mSpGnXbDewkSRJkiRJkqRJqgmbmbkZIkqSZJqwmakJEmSJEmSpJqJmxGSplkS
ZIkSaoJm5GSJEmSJEmSasJmpCRJkiRJkqSasJmpCRJkiRJkiRJkqSpImxGSpIkS
6+ulatpT2hfMptPjfWvU3eOQIx5/qpf/gIboW99CxaCHFjvZ6x5LGNXD4CH1P9TJw6BCdSyr12m69StJUlYe
G6N+7n2O7nqLY3kbnkiW0z59b71iaoUqDg/Tv2cexXU/RMquLriWLaZvbXe9YksZh1+Is9O8/wJNf/Wdyq
ATAwS1bWXrt8+laurjOyXQ+GjhwkJ1f/QblwUEADj74MEte8xFmxmLV9W52Q63w0dP86uf72HwQMHATi8
9RHmrb2c+WsvJwoekK/GMnjsGE99424GDx8WR5h/1ZXMu/IyIqLO6SSpuR1/qpen/uXuk88LrQ+x
7MUvpH2eDUlNv2M7dtL77e+efH6wo51lP/FC2rrn1DGVpPHNu1+2Qj8oT99z2pevr27j
vZiDxh/6b7KQ0MTrCGVBsDBw+dbESecOCBhxg8erROiaSJDR44dLIRecKB+7cwZL1K0pSUBGfZv+mBU8b
Kg4P09e6UtUyLNZEN9fey7b/MpY6W+fgZGvSeV1BhsRp6FHBoaOzY4COWsQxqd78pDY5vg5aESpPWo+s
pyeexguezvSjWk8jj1muUy6e9SSZqazPE/P3kgh6qhnGMOHIIJ3pdKqjubkWehc+kSGHXG1twr1lBo9Wx3
1V7HogUw6hTCeZevodjeVqdE0rC27jkURtXhrJURaJnVVadE0sTa5nZTaGs9ZWZOqoto6bJeJWkqim1tzL1i
zamDEXT0LKxPIM1oxc4O5l5+6SSyYz9Jrn8/BBx6iNDDIvMsvpdRapO2ufPZ9l1L+
DAlocoHe9j7mWX0LVsSb1jSbTOns2ya5/Poa2P0LdvP7NXLmf2hSu8uZIaUtuc2Sy77gUcfGb/fsPMOeiFc
y6cAUFb04nSVM2a/kyolDg4IMPU+zoYN4Va2ifP7/esTQDRQRzRzVl9Eob2Nw1sfoWXOLOZdtsbrk0oNyk+
GZyGKBbqWLKZj0ULI9IO16ioKQefiRbQvnG89quG0z5/Homf/GOVSiWJr65lXkOqoff48etZdbb1K0jQrtrcz
Z9VKZq24ACL8okdV1dLZwdxLVjN75QoKhSJR9ERQqVHZvTgHvoiqkViPalRRKFD07tqEtarJFWPX5qrlvxiU
Wp8vuuWJEmSJEmSVBM2IyVJkiRJkiTVhM1ISZkiRJkiTVhM1ISZkiRJkiRJkiRJkiSpIkiRJkiSVBM2IyVJkiRJ
IOBIR765VZkmSJEmSJElTU/NmZEQUgduBVwJrgTdFxFxNpRi70N2J+ZlwK3AR3AR8YNf2PgC9PNUuWS2S5PNX
NSFVVLpXIzHrHkCaUWSZLpXrHkE4rS77mS9JUZblMln3NV2PLUolMX/OlRlaP25pdA2zNzG0AEfEp4Hpg8
4hlrgfeV3n8OeCDERGZmRHxXwAR4Oi5BiiXSgwePkjqfnqeIQoHOxcto6ZpNeBdNNZBSfx/9+/cyeOgALbP
m0L6wh5aOznrHkk7KTIaOHaWvdxflwQHaF/TQ2j3POxiqoZSHBhk8dJC+vbuJ1lY6Fy2ZdZsIqLe0SSpaW
QmQ0cPc3z3U2RpiI5Fi2nZmdM9e7ZKuhlAcHGDh0gP59Eyei2tdOxaXa5Akts2bXO5akYcdjS+7YceGLE8+2VsGXy
cwh4CCwMCJmA78B/M4dPsAgwePsjRx7YdfYM5U5ObFldFZ5Q5dfuahZOy5/5TDXpOoUBnz9LR7c/r
Ht1KaXCg3tGkc0rHj42F42xYGDx2gdwPwyXGD7x2gdPwYx3Y3ZNDBCg7s0
On4UY4+8QgDhw7UO5Z0iv59ezi243F42FKx48xcHA/h7Y9yNDxY/WOJWkczXYo4PuA2zLzyJkWjIgbImJjRGzs
7e09OZ7lEn29YxPrZAXAXU9XYRDUKUORvZ+jo4VPGygP9l9Pr6ahlROm2dDh0/BqMuIdDXu5Py4GAtI0oT1m
l5aIi+3l2jlk6Gjp7xbYQ0rU73u1RqFKd9zR/1vhSgv3cX5dJQreJJwMR1WhoYoG/PqM/5WaZkM1JqSPVoR
u4ALhzxfERlbNxlIqIFmAvsZL4Z/EFEPAr8KvvCfIuKm8lezsmesyc11PT8+IOUEUx9ntQvGcdkY6VxPXKB
OePhgFTytUbZ22TsepxygUwDJVjU1Yp8G4l2CJaLbvYtXsTve7VGoUp63T8d6bFgr4oq9am6hOIwLGe333
UmxSQ6rH/8x7gDURsToi2oA3AneOWuZO4IbK49cB/5TDXpSZqzJzFfDHHwO9m5gfP5odHoUBnz9LRg7TN
mXv2eyJVSbGtnbb5C08Za5k1h2J7R50SSWMVO2cRxVOvFdW5ZDmFFq8ZqcZQKLbQseSCU8aiUPT6UZJ
0llpnd49p6nQuuYBC0QM61BgKra10Lj316m/R0kKxo6tOiSSdTs2vOJyZQ5WjGe8CisDHMnNTRNwKbMz
MO4GPAn8TEVuBLKdNy6w5zLn48uFTswsF2rrn0dYzFQ4dI1azp/hDQlUSzStWQ5rbO7GTx6mJauWbTO6r
bJo4bS0tHJnIsvY/DwQcqDA7T6u1QNqG1ON3HxZQwePECHtZXWONXNp6fSDiSSdjZbOLrovuYLBQwcol4Y
qn5/8YkeNpW3ufAotLQwcOkixvX34NbdDgzmkRlSX259l5gZgw6ixW0Ygm6Xy7ZtvO9Ote169o0g6Ay+g
IEmSJEmSJKkmbEZKkiRJkiRJqgmbkZIkSZIkSZIkSZJqJqKz3hmqLiJ6Gcemeb0LgD3TvMR3paKQ853uWPZm5/mx
WGFWjjfT3dyZmrY5qZz3rGoXT/i5tpr/b6eD+1Zk01+1sZ01+lkNcu/b7PkhObJei45p/qaP50a6e/ZLGM18+/SRvk7

PBvNmBnO39z1es2fjEb6NzHLxGqR55zqVOM7L5qR1RARGzNzXb1znNBIecwyNc2U2azV0UxZofnyTpX7
O7M1y/42S05onqzNknMijZTfLI2b41w0Y/ZmzAzmbkSNtG9mmVij5dGZeZq2JEmSJEmSpJqwGSlJkiRJkiS
pJmxGnrs76h1glEbKY5apaabMZq2OZsoKzZd3qtzfma1Z9rdZckLzZG2WnBNppPxmGatRcpyLZszejJnB3I2
okfbNLBNrtDw6A68ZKUmSJEmSJKkmPDJSkiRJkiRJUk3YjJQkSZIkSZJUEzYjJUmSJEmSJNWEzUhJkiRJkiRJN
WEzUpIkSZIkSVJN2IyUJEmSJEmSVBM2IyVJkiRJkiTVxHnRjFy/fn0CTk61ms6aNepU4+mcWKdONZ7OiXXq
VOPprFmjTjWezol16lTj6ZxYp041njSNzotm5J49e+odQTota1TNwDpVM7BO1eisUTUD61TNwDqVmtd50
YyUJEmSJEmSVH82I6WzUCqVeGpnLwcPHqp3FGlCR48cqnHGlCe/fsp3f33nrHkCY0ODjErp2
7OXzoSL2jSBM6fOgIu57czeDgYL2jSBrHwQOHeGpnL6VSqd5RpIZiM1KapB1P7OS23/swP/3yG3jrz/4K3/j
a3QwNDdU7lnSKH3xvM+/8hZu5/qVv4bd/7fd4+KFH6x1JOsWRw0f4h89s4I0/9XZe/8q38/Yb38ew/Ufpb9ew/U
O5Z0isce2c7v3fLHvPalb+Htb/7/uOeb3yPTy0WpcWQm37n7+9z4736N177sLfzX3/ojHtv2RL1jSaoYHBzi
G1+7m7e+7lf46ZffwG2/92PG2/92F2PLGz3rGkhmEzUpqEoaEh/uajn+Xjf/4Zjhw+ysMPPPcpNv3AzD2zaWu9o0k
mPP7qdX3rLe/jut7/P8WPH+ccv/RO3vPv3OXTgcL2jSSd999s4Jb3flCndvWyb89+/uDWD/KNr91d71jSSX
19/fzpH/45n/vklzh29Dib73uQd7zlPTz0wLZ6R5NOevihR/nFn383m77/AMeOHucLn97fAf//dD3H8eF+9o
0kCtmx+iJt+4WYefuhRjhw+ysf//DN88q8+7xGSUoXNSGkSenfv5e/n4nF+Ebga67FHto85nf
C+e+9nx/ZddUokjfWVDV8fM/a5T36JoUGPNFdjeGrn7jF1OjgwyKMPP16nRNJYj2x9P52lf+hV1PPl
WnRJJG2rrlEcrl8ilj/vbL3mJGqnCZQQ0CR3t7SxavHDM+KzFs7Z5Ne7uv+VIjmD1n7P/RniWL6PD/qATYjJQm
Zf7CebznlncSESedNds7vqkEYa3+xx3oPO6Z5Ne7uv+VIjmD1n7P/RniWL6PD/qATYjJQm
Zf7CebznlncSESfHLlt7CWufflkdU0mnuvSy1bzip158ythNv/bvuXDV8jolksZ6yfoXndLo6ezs4A0/f/0pv1+le
lp6wWLec8tNp4w9+7k/xuVXXlKnRNJYa668hGue/6xTxt79n9857hc+kmrvyqsuY80VF598857ffybwF
c+uYSmocLfUOIDWLF173XD7+97ezdcs2uud2s/bpl/mGTw1l7rxubn7fr/Can30FT+3aw0WrV7D26ZdRLH
rEmRrH5Vdeysc//0E2//BBSqUyVz5tDZfZ5FGDecVPXceKlcvY9tBjLFg4j7XPuJyeJYeJYvqHUs6aVHPAt7/R7/Jp
vseZO+efVx86UWsveryeseSVLH8wmX8yV/8Lpvw28Khg4e59PKLIJ9iMlCapta2VH3vW0/ixZz2t
3lGkCS1avJBrX/r8eseQTuviNau4eM2qeseQJtTR0cGznvMMnvWcz9Q9Q7ijShJcsWs2TZ4nrHkDSB5RcuY/m
Fy+odQ2pInqYtSZIkSZIkqSaq2oyMiPURsSUitkbUitkbEzePM/48RsTkifhAR/zciLhox74aIeB/NkRcV9lm38
SXmRKkiRJkiRJagpVa0ZGBG4HXglsBZ4U0SsHbXY4MXY94B1mfkM4AsA30ZXQC8F3gucA3ob4W3oiYX1nnQ8D
bgTWVaX219kGSJEmSJEnS9kKnmZHXAFcAfczcNhVmH4yaSXXAFzsc1tmDgCfAq4fuBmBmwWZjWfw1OvxqXIN
hxHLgO7M/FZmJvBx4Hu9saCLuDH53KrZsyicsrjywBMjwvvE3ktbcDCVxZ6Ne7uv8srjywW5TkiRJkiRJUoNoiBvYRM
S/A9YBbZNKvzS6zajCRSE6mrfGiuu/bgNN80x12nLeoUK9uKlEbF6osNEc7tMiTqPazN4aImDQEx7lKjJtFDaFMSw
3i86tXTxJxF3SoXpLqRlrgLhHCw9k8pXhDrVoa/WPACmAu8Fsm0X2WHpzAn4IeqDGLLDAPZOA01lxzGlN5NoP71m6F
hSWBAPXLsNjrc59IHN8+b2OMz+Ag3ZgXcO1MqD0fPnfWxKCqpX/ZfRXgCWt+gDWuRTTGsT1hnoCo3Jpp1pOobpG
PVRW0pbNqdHn2MTVvfBpLo9Cq+01sxd/jm+/iRhJ5S0rk0bb1SEQ2PBp2MVGMbvbldWM/+xUj0qwZ1W8IB3vZ80qB
kZ9GT/eqvfrMw9+/Uv3MYkDyI0n5WDBDyyffhM4t3EdTk5k+TOMHlNFVx1LIVDmTaFdaROk5xROLKBanEDqCCVzNHOg
09Tp8xMxLNuX3GnpFGD4VXnUgPBOY9KiLgnzEwxEeoJ4hUnfRuEF4Brp+WlDQG/qOWfBnAm1+aYx0LoDD4VQOZaUwt
sVwZcAbACBu99W2iTWvFPP/89hv6tM8EPtYRBbXZEj8WutWPb4R7h8qfTZ+N04L1/dn+ztDS4ZD/6R55NP/nmPjHVzm
o0oJhHcjwPfTutBlovaQvoAkjj5B1Bgq2YwBVXJmc1LKpYs8E2wzdFCQ6fNlgwM76UfMI7gCQZamaDcCEn4o8Rqkf
bH6eA7afc3BAX6Xm9N72vhxCeAWMnBcSBUcdWzSf5EmobHOjezHz1OeQVZcFTcP6v7YMmlTbTzgNjGAi3VKJBsaHvRi
3DxFBOsCfMqm3UWr2oJXhVxU3vyfEgbHDAsrwRVYGDV7OCuRM3zfBhELBJNANIdKWmcFfn5hqBe/Yd7FTSTIZA21IPDM

37xmLHnvuzZngKrhjBv4VxWXXbhKWMRweILvFyGmtus7llc85JnjRm/9GljfydLtbR23eVjxp77snV0zuqoQ
xpJ55NisTjuZ/BnvuDpdUgjTa8znqYdEc8aZ7okIk57vcmIKAK3A68E1gJviojRnavHgbcCnxxnE8cz8+rK9JoR
4x8AbsvMS4H9wNvOtA+aHs99+XO45qXPBqBQLLD+TS/lymddNu6yg0ePc+Chx9jx9W+zb/PDDBw6Mu5
yUqO57BmX8JobXkmxWATg6udfxbWvegERUedkEsya08Uv/PqbWXbRUgA6Z3Xyjvf+AisuvaDOyaSpKRQ
KvOSnr+UZP34VAMWWIj/9tp/i0qt+1IwcOHyU/VseYfvXvs3+B7YxcORoveKqCWQmR5/aw667v8+ub32f
o7t6yfLZn1p9+dVr+MmfewWF4vDHpnU/8UxesP650x1Xksb17MrvnIggCsHLXvcTPO2aK+sda0YZOtbHw
a2Ps+Pr32bvpofoP3i43pHOC5O5gc2fAc8C7qs8fzrwQ2BuRPxSZv7vCda7BtiamdsAIuJTwPXA5hMLZ
XmTemcQw92AlwBvrgz9NfA+4EOTWV9Ts/iCRfzib/8CP/22V1EoBEtWLKaldWWwJlYeG2P2dH7LvhycOKd/
KrGWLWbn+hbR0+i2yGlvL4BBX93Rw1fveQimT9uPHmJVeL1KN4XjvPvq+9R3efsNLOR4ttLUUWPn0S2ht
ba13NGnKll64hHf97o3sfnIPLS0tLFnRQ7Fl+Iuh0sAgu/71exx8+HEA9m/eypyLV3Dhi59Hsd2TZDTWsV17
eOSL//dkA7L33s1cfP3LmLXs7I4kn7ugmzf80mu57tUvoFwq0bO8h47O9mpElqQxepYt5G2/+fO86ri3riRj+
DN7aNpk2jiajXCrRe+/97Ln3/pNjHT3zWfWT19E6yzPjqmkyVfwk8LbM3ARQObrxVuDXgb8HJmpGLGLdGX
mRlO3A2XyN2RMRGYAj4/cz8B2AhcCDzZZGdge+XnqEbaO9u48uD3JLT/5X3Hzw8ohE57OjfTvP2QzUg3vyI
5d9Pfuh97hmzX1A7vLJWZdsJiiDR/V2aFtT1AeHKL/sR0UGH6B7B3sp2v9tURxMvekkxpbR1cHKy8de5fi/g
OHTjYiTzi8bTv9zzxE15JFtYqnJnJgyyOnHglZTvZt3nrWzUiAltYWlq9eNo3pJGny2jrO/Blc52bg0BH2/OCBU
8b6evfTv++Qzcgqm8wnl8tONCIBMnMzcMWJIx6r6KLMXMfwUZB/HBGXnM3KEXFjRGyMiI29vb3WzbHSahx
ZTnHHS+XSjVO0tis0cZUHhpbp+WBIZigrmc667SxlAbHHqVbGhgkOT/r8wTrdObLCe5cfC6n3daDNVp7pY
GxN5gZb0w/Yp2qGVinmk5ZznE/55XL9i6qbTLNyE0R8aGIuK4y/RmwOSLagcHTrLcDWD5qelllnrWI2FH5uS0i
2VP7cBXwOeCewF5o24XuWE28zMOzJzXWau6+nxwv611N49m9kXnvrtcWv3bNrnz61TosZkjTam2SuW
wKjrQ/ZcfeV5exqgddpY5l584ZixRT92BYXKNU7PV9bpzNc+r5vOngWnjHUsnE/73EndU7HurNHam3/F2O
MYFq5dU4ckzcM6VTOwTjWd2rpn0z3q/XVLV4e9ixqYzGnabwV+GfjVyvT/AH/O6xvM0JlmHMb6wD
+EZ+dK3H04qI+cCxzOyPiEXAC4A4A/yMyMiK8CrwM+zYMAfHEy21tTcs4A/yMyMiK8CrwM+BdwAfHEy21TtFNvbuODadRzY8ggHtz3BrAsWs+Bpa
2ib7WHOanxdixey+jUvofd7mykd72fRj13B7JWemqXG0LVkEate9WJ6v7eZ8lCJnquvGG6gSzNcS2c7K172
4+x/YBuHH3uSOSsvYP6VF9PS5eVfNL5ZF/Rw0U9ex5577ycz6bn6SrouWFzvWJKkBlJsbWHp+5mY9F8D
m59jK6li1h41WW0d8+ud7QZ74zNyMw8Dvz3yjTahLdIzsyhiLgJuAsoAh/LzE0RcTuwMTM3AJ+ksoJDMYqOAhPTi/Mgr6y2UfaG1xTsRq2lEocDs5Uvo
ojfycynAVcCH6nc2KbA8DUjT9z45jeAT0W8T0X8cpdHrqi8K8jM1k7C4nfhEazQzGoQ2PJ2QpgCOHs
WrqILCfFcW7SJNVLoaXInJXLmLV8MZlJscX61PmjY/5clj7vahY/+yrfW+iMCi0tdK9azuk4VSyvPz+8jyCVJ42v
vnsOSdVex6BmXU2gpEgWvw14LE36KiYjPZOYbIuI+GHsxqsx8pk2npkbgA2jxm8fgr+1Hr3evzJ81+7
xtrmN4Tt1qwkU27zhh5pToVgc/hpFakDn+2nZOn9FhO8tdFZsQkqSJsP3F7V1ukMq/kPlz1fVIogkSZIkSZK
kmW3C408zc2ceHchQPDoQ2sqj3cD+2kSTFmKNSDInMmnMcsaT4SSPi7cDngIR9UhJZr0IWcsaT1ZoBpN9JiIkSZIkSZK
N/N+hBAZj4EeCs6SZIkSZIkSWdlMs3I/swcPs+I/swcOPEkIloY54Y2kiRJkiRJknknQ6k2lGfj0i/hPQGREvBz4Lm6sSRJkiRJki
RJkiTNNM4M9AL3Ab8Ib8IbAD+czHU0SZIkiZIkSZp5nBT2Tmn1c7jCRJkiRJkqSZx5lWiaxzIuBT2Tn1c7jCRJkiRJkqSZx5lWiaxzIuBT2TJ3wDh/1
AiXh0R86sdTJIkSZIkSdLMcsBoCIuAB4HXA7cMFk1pUkSZIkSZIkSZKk8E87YUIyIfwe8CHg6sAf4lSDd
IkSZIkaYaZzNGNfww8DHwY+GpmPDtAmkHx5kwDm8BGTK/QMJMZIkSZIkSZIkSZIkSzhwTBDANKNb
hmbkRHRDawELgJWAXOBcnVjVVSZIkSZIkSZIkSZIkSZppJnOk7B3AemAlZg8PhuWktJZ8L9MBXfD9yOlo2vxdO1xdgAzdfX2qmwWTHX8J+KIkNNs2V8QE0VIUfvtDJmd6FgZ9nwjQLqjj01Aa3ubHzHPaqvdUIbfsQVxufrsPnmc
iLWR8SWiNgaETePM//+aiPhuRAxxFxOtGjF8dEd+MiE0R8YOL5v1VRDwVEpMkSZIkSdSZ3S+pjM
kZHnJCKKwO3Ay4HtwD0RcWdmbh6xWdT0R6cWdmbh6x2OPAW4F3r1l9GPCWzHwoi4i4AvhM0Rd2Xmgcr892Tm56qVXZIkSZIkSdLMcOBOYHG0OenG9K5WzHwoiVkiRJkiRJkiSZZsVkG1rv30Y2GWKLeIkSZIkSdKMNaUznqYY9BcuBJ0Y
8314ZOysRcQ3QBjw8Yvj9ldO3b4uI9qnFlCRJkiRJkiRJklQLEx4ZGRF/CuRE8DDdk5omjJ38T
2MVwg/IO4DeAW8dZ90bgRoCVK1dWO6qrxRNQPrVM3AOlWjs0bVDKxTNQPrVJoZTndk5EbgO6eZz
mQHcOGI5ysqY5MSEd3A/wJ+KzO/Mdl1k6HmTrFVqZlSfRqgNv6VPB3C1hsbjMjvJsXXYrhcVTmDH
lWjs0bVDKxTNQPrVJoZJjwyMjP/eorbvgqxYM2OZrCzNCBV48pQV3yt7Jn7Ja2WdRnUpqCbLugsWdZlhoq6f/AtFu+QxZ2p6ETZf8AE
U5IkSZIkSVINnO407S9x+Xqx+tO0X3S9x+cSjsT5DWfmUETcFI4uVZ0mYYVamiWLgV2JiZd0bEcxhuOs4HXh0Rv5OZTwPeA
FwLLIyIt1Y2+d0bMvBf424joAQpw8qMGu2dVkiRJkiRJkiRJIgUh2d7m7a/22qG8/MDcCGUWO3jHh8D8Onb49e7xP
AJybY5kummkuSJEmSJElS7Z3uNO2vnOgvpRUbl1rDDUl7vn3gcEZ3AysycUpNUkiRJkiRJkiRJkmac093SMac093ABoCleDXDp0P/Y+X51RFxZ7
WDSZIkSZIkSZpZztiMBN7H8B2rUuOwuoqZJEmSJEmSJEkmSJEmSJM1Ak2lGDmbmwVFjE97RpIkSZIkSZIkSZLGc7ob
2JywKSLeDBQjIkLLeDBQjYg3wLuBfqxtLkiRJkiRJ0kwzmSMjfwmS4V4GtAP/WPwCPjVaozTPOC8cjzIzDwG/G/FZlk
iRJkiRJkqRZcsZmZERcVEvbWDVy+cr8SiRJkiRJkiRJkiSZZpJnOk7B3AemAlZg8PhuWktJZ8L9MBXfD9yOlo2vxdO1xdgAzdfX2qmwWTHX8J+KIkNNs2V8QE0VIUfvtDJmd6FgZ9nwjQLqjj01Aa3ubHzHPaqvdUIbfsQVxufrsPnmc
xQ1ZNIkiRJkiRJmtEmbEZGxILKwy9nNpY9FxC8DX2D4JjYAZOa+KmeTJEmSJEmSJMkmJEmSJEmSNIOc7sjI7Jw8+n6TpEgeOkahlbLT4zd0LXbu0A7bFG6A/6LHHP3RuNEJ5+TJkx/Ia0Ds0kHuMc8OS
oWSJEmSJEmSNPNM2IzMzNW1DCJJkiRJkiRJkqmJCJ+ptfdA9Bs0FSFdSFYYcZ0aoSnmSJEmSJEmSNCkTNi
OBjwADABFxLfD7wMkAdk9l4RKyPiC0RsTUI5n/rUR8d2IGIqIaQ142ad0NEPFSZgx/uyIuK+yzTiJiBi9
XUmSJEmSJEmN53TNyOKIm9T8W8W+COzPx42cOmZZl0zANbBwWXsgXjahjJ2PxCKJm2FA+bXDQmj+GnemeHJmNEq9BPQAP/Z
4HnAtcA742I+ZXZHwLeDqpOvPlEWSJEmSJEmSJEmSQJ64p+UJwnpS0NU9jb1Y1cBWDqb
D9yAUy89HM/AFQHrXuvwG+kpn7MnM/8BVVgfUQsA7z8uZmQwfqfnaSWSRJEmSJEmSJmSVGenayr+HfD
1iNgDHAf+GSAiLmX4VO0ZNeZl3ud6jhM9wQ48MeL5doaJyM8dZXpm2jzMuSZIkSZIkqcFNeGRkjZZr4f+DXgXr4AXVo5E
PLHOr1Q/2tRExIxR0RsTEiNvb29b29tY7jjSGNapmYJ2qGVinmk5ZznE/55XL9i6qbTLNyE0R8aGIuK4y/RmwOSLagcHTrLcDWD5qelllnrWI2FH5uS0i
5PY9g7gwhHPV1TGJmOidXdUHp9xm5l5R2auy8x1GoaQ3Ae1G3qI0G1qmagXWqRmeNqhlYp2oG1qmaKRmPTV09k/yxUu1Yo2oG1qk

0M5y2GTlF9wBrImJ1RLQBbwTunOS6dwGviIj5lRvXvAK4KzN3Aoci4nmVu2i/BfhiNcJLkiRJkiRJml5Va0Zm
5hBwE8ONxfuBz2Tmpoi4NSJeAxARz4mI7cDrgY9ExKbKuvuA/8JwQ/Me4NYRd/b+ZeAvgK3Aw8CXq7UP
kiRJkiRJkqbPZO6Kfc4ycwOwYdTYLSMe38Opp12PXO5jwMfGGd8IXDW9SSVJkiRJkiRVWzVP05YkSZIkSZK
kk2xGSpIkSZIkSaoJm5GSJEmSJEmSasJmpCRJkiRJkqSasBkpSZIkSZIkqSZsRkqSJEmSJEmqCZuRkiRJkiRJkmr
CZqQkSZIkSZKkmrAZKUmSJEmSJKkmbEZKkiRJkiRJqgmbkZIkSZIkSZJqwmakJEmSJEmSpJqwGSlJkiRJkiSpJ
mxGSpIkSZIkSaoJm5GSJEmSJEmSaqKqzciIWB8RWyJia0TcPM789oj4dGX+3RGxxjL+cxFx74ipHBFXV+Z9r
bLNE/MWV3MfJEmSJEmSJE2PqjUjI6lI3A68ElgLvCki1o5a7G3A/sy8FCki1o5a7G3A/sy8FLgN+ABAZv5tZl6dmVcDPw88kpn3jl
jv507Mz8zd1doHSZIkSZIkSdOnmkdGXgNszctmTkAfAq4ftQy1wN/XXn8OeClERGjjlnlTZV1JkiRJkiRJTayaz
cjlwBMjnm+vjI27TGYOAgeBRaOWeQPvjdQ6QeBhaOW+bfA340a+8vKKdq/PU7zEoCIuDEiNkbExt7e3nPdB6lqrFE1A+tUzcA6
VaOzRtUMrFM1A+tUmhka+gY2EfFc4Fhm/nDE8M9l5tOBF1Wmnx9v3cy8IzPXZea6o41qmZ
gnaoZWKdqdNaomoF1qmZgnUozQ0sVt70DuHDE8xWVsfGW2R4RLcBcYO+I+W9k1FGRmbmj8ufhiPgk
w6eDf3x6o09s4MBB+vbsozw0RMeihbQvmEcUGrqnqxls4OAh+vbspTw4SMfChbQvmE8UrUfV3+DRY/T
t2cvgkaN0LJhP+8L5FNva6h1LGtfg0aP07dnH0JGjtC+cT/sC61WNr3//Afp6h982n3hPKknns/LQEP379tO3
dx/Fjg46Fi2gbc6ceseSNI5qNiPvAdZExGqGm45vrgkaN0LJhP+8L5FNva6h1LGtfg0aP07dnH0JGjtC+cT/sC61WNr3//Afp6h982n3hPKknns/LQEP379tO3
dx/Fjg46Fi2gbc6ceseSNI5qNiPvAdZExGqGm45vBN48apk7gRuAbwKvA/4pMxMgIgrAGxg++pHKWAswL
zP3REQr8Crg/1RxH07Rf+AgO7/6DcqDgycCseza59O5xG9kVHsDhw6x82v/Qqm//+TY0hf9OF3LltQxlQRD
x/vY/a2N9O/dd3JswTOextzLL2WCK2tIdTN07Di7v3kP/fsOnBxbcPVVzF1zifWqhtW3dx87v/YNslQGIIoFlv
3EC+lYuKDOySSpfo49uYvd39p48nnLrC6WXfcCWmfPqmMqSeOp2iFUlWtA3gTcBdwPfCYzN0XErHHxms
piHwUWRsRW4D8CN4/YXAE5m5bcRYO3BXRPwAuJfhJuefV2sfRjv+1O4fNSIBMjmw5UHKpVKtIkgn9e
3Zd0ojEmDfD++nNLJGpToYOHjolEYkwP5N9zN05GidEkkTGzh46JRGJMD+H97P0NFjdUoknndnhRx8/2YgE
yFKZw48+XsdEklRfQ3397PvBplPHjh6jf/+BCdaQVE/VPDKSzNwAbBg1dsuIx33ADzA6ydY92vA80aNHQWePe
1BJ6nUPzB27Hg/WS5DsViHRDqflQfGNh3LAwNQLo+ztFQ7Oc4XNFkqU7Y21YDG+0Ixh0rDr+1Sgyod7x9
nrK8OSSSpQZTLlMb5fDTe+1JJ9efF5c5C19Kxp792X3YJxdbWOqTR+a5j0egbz8PcNZdQbG+vQxrpR1q751
AY9Xuxa/kyWmd11SmRNLG27jlEy6nfzc5auZyWrs46JZLObM7FK8cZu6gOSSSpMRQ7O+hec/Gpg4Wgrb
u7PoEknVZVj4ycadoXzGfJC5/H/h/eT3loiHmXr2HWBUvrHUvnqfYF81j6oh9n36YHKPf3M3fNJcy6cHm9Y
0m0zZnNsuuez77NWxjYf5DZK5cz5+JVFFp8yVHjaeuew7Lrns/+zVsYOHCI2SuX033JautVDa1j0SJ6nreOA
5u3QCbz1l5Bx6JF9Y4lSXUTEXRfMvx+8/DDj/8bcNA7faZ+FQkuRWRcspaNnIZSTYrt32l
T9RKFA17lltC9aAOWyR0SqobQvmM+S562jPFSi2N7mjUDU0DoWLmDJ86+hPDhkvaopFNtambNyBV1L
F1ee+55Uklq7uph/5WXMufgiCsWiXyKDcz/nefA07LVSKxHNapCS4tvAtU0CsUiBa//rCZjE1KSxmrxIA2p4
XnNSEmSJEmSJEk1YTNSkiRJkiRJUk3YjJQkSZIkSZJUEzYjJUmSJEmSJNWEzUhBJkiRJkiRJNWEzUpIkSZIkSZIkSVJN
tNQ7QL0MHT/G0PFjRKFAsfSfz+F1laKnbMotrbWO5Z0ilJ/P6XjRymR0dHs7/S2Mefiy2xIqmFkqcTxp3bSv3f7ybGO
CIi6h1LOikzKR0/xlDfcaJQGK7Tdl/z1VjKQ4MMHTtGeXCAQlsbLZ2zKLSct2/TJemcZLnMUMN8xSsePUyi2UO
zqotjWXu9YksZxXr7LGTx6hMPbtkAmANNHSwpyLL6elo7POyaRhWS7Tt2c3fU89eXKsbf4iui64kEKxWMdk
0o+U+vs4/MhWygN9J8dmr15D25y5y5dUwlnWro6GEOb3sIGH7NL7S2Mefiy2xIqmFkqcTxp3bSv3f3ybGO
nqV0LlGFHzNl6TJGjxyiCOPbj35vNDRyZxVl9qQlBrQeXeadmaZvt6nTjYiAXJoiMHDB+uYSjpVaaCfvqd2njI
2sH8P5b7jdUokjTV0/NgpjUiA408+QXloqE6JpFOVSyWO7drBiUYKYkQHlwMGjR+oXShql1N93SiMSoK93F
6X+/jolkqTmUx4a5NiTT5w61nec0vFjUok6XTOu2Yk5Rzz4RmgPOAbPjWOLJUY+eH5hHK5VPsw0gRynK
ZjeWiQzHId0kjjyDI5ODh2eGjsmFQvOcFr+0TjkqSxslymPM5rfrnk71KpEVW1GRkR6yNiS0hG
rsy/OyJWVcZXRcTxiLi3Mn14xDrPjoj7Kuv8Szf6/6RqKba3Uxh1CmcUCrTOnlWnRLP1hBGukMwDKu0QYEGBqC
2Nk1Zqx9QQ+FFq9tqsZQaGmlcGiMeMtXbPrkEYaX6GtgxjXb1e7PQ2uZphZJ0O/FgqtbeO/5ntvCKkhVa0ZGRF
F4HbglcBa4E0REyBsXbUYm8D9mfmpBtwAdGzHs4M6+uMq0/O2ArMj41fpyq6PkhvTQ1GqMgQ4oGDRUtoZXFiKQuB
XhKlq6Zp3tZqSqKbS0MnvlxcNN8ghaZs1muzuo1fjBRQ2np7GL2RZdSaGuHQoGOgD1P0koFCi0tTN71a
Rj8fC19wqtbcxaeQktXWMb6VK9FNvamLPqUlpmzRl+zZ/TzexVl1Jobat3NElqGhEx/F500WIoFCi0tTN71a
Xjfnkuqf6qeQOba4CtmbkNICI+BVwPbPbB6xzPXA+yqPPwd88HRHOkbEMqA7M79Vef5x4vxLAl88mWKG1j
c4ly2ibv5CIoOAditWAWjq7mL1yNeXSEFs8cY1ajhRKNA2dx4ts2aR5TKF1jYbkWo4xbZ2OpdcQPuCHqIQ
HrmrhtTSNYvZqy4lS0MUii2Er/mSdNaK7e10LbuQjkVLhr+EbDkv79crNYVvqnqa9HBh5BdntlbFxl8nMIeAg
sLAyb3VEfC8ivh4RLxqx/PYzbHPSim1tNiLV0KJYpNjWbiNSDa3Q0kqrxd1GpBpWRAy/5tuIVAMrVF7zbUR
K0rkbfs1vtxEpNbhGvYHNTmBlZj4T+I/AJyOi+2w2EBE3RsTGiNjY29tblZDS2aiLBFijagbWqZqBdapGZ42qGVin
agbWqTQzVLMZuQO4cMTzFZWxcZeJiBZrA3M/szcy9Azn4HeBi4LL8Ij8Nsk8c19Mz9orY1Ur
1Zo2oG1qmagXWqRmeNqhlYp2oG1qk0M0RmVmfDw83FB4CXMtww3Ae8OTM3jVjmPwBPz8x/HxFvBF6bmTdExCJgX2aWIuIi4BuAZ27fE7ULCOtwcTDFB4GXMtwwvAd4c4c2ZuGrHMO4GnZ+Y7IuKN
wM9k5hsiogfyYl5mliLgY+OfKcvsi4tvAu4C7gQ3An2bmhjNk6QUerc6en1KAHmBPrUE3E/wHJv7B+sjXs0Ut8KwH4xxy9Sp+TdgOEu
Gm2kv78zMWt1VDvrWdconPZ3aTP93U4H97c2prtOJ6tZ/n2bJSc0T9ZzyTnV1/zp1Eh/z2YZq5l/lzbK3+HZ
aMbMcP7mrtdr/mQ00r+JWSZWizznVKcaX9WakQAR8ZPAHwNF4GOZ+f6IuBXYmJl3RkQH8DfAM4F9w
Bszc1tE/CxwKzAIlIH3ZuaXKttcB/Jau5ExoIiI2Zua7WP3cijZTHLFPTTJnNWh3NlBWaL+9Uu
b8zW7Psb7PkhObJ2iw5J9JI+c3SuDnORTNmb8bMYO5G1Ej7ZpaJNVoenVlVr+paOWJxw6ixW0Y87gNeP
856nwc+P8E2NwJXTW9SSZIkSZIkSdXWqDewkSRJkiRJkjTD2Iw8d3d3fUO8AojZTHLFPTTJnNWh3NlBWaL+9
Uub8zW7Psb7PkhObJ2iw5J9JI+ZpIJxoAACAASURBVM0yVqPkOBfNmL0ZM4O5G1Ej7ZtZJtZoeXQGVb1
mpCRJkiRJkiSd4JGRkiRJkiRJkmrCZqQkSZIkSZKkmrAZKUmSJEmSJEkmbEZKkiRJkiRJkiRJqgmbkZIkSZIkSZJqw

makJEmSJEmSpJqwGSlJkiRJkiSpJs6LZuT69esTcHKq1XTWrFGnGk/nxDp1qvF0TqxTpxpPZ80adarxdE6sU6
caT+fEOnWq8aRpdF40I/fs2VPvCNJpWaNqBtapmoF1qkZnjaoZWKdqBtap1LzOi2akJEnS/9/efcfJcZeHH/
881+/Uy0mWJdmy5IK7sIUBG0wzJTSb0AMEg3+QkAQCIRAIAZIQEkINBILjEEIMcEkEAdCMQZjg23AXbbc
Jfci2bLVdbry/f0xc6e9pjvd3c7s6j7v1+tet/ud2d1nd5/5zs4z35mRJEmSVD6LkZIkSZIkSZIK0VR2ADowde/Y
xY4HNrLjwY20L5zPzGWLaZk9s+ywpHHZtekxtt3zAL27u5i1YikdixQfQ0GR3qfKllNi1aTPb7n6A1NOb5eeiBU
Sj+xZ14NuzbQc7HtjIzoc20XFQJzOWLqJl5oyyyw1KNSimxa+OjbL3rfgBmHbqUjkXziQb7S9WenRsfdd0uaV
px61pTrq+nh41X38jmG28faJtx8CIOef7TaGpvKzEyaWy7HnmM9d+9iL7uHgAeuf4WDn3RM5l96Rym
Brk2bWf+dn5B6ewHYdN3NHPbSZzNz6eKSI5Oqq3dPNw9dcS1b7rgHgHM033cSOv9d7P5W6eeiBU
px61pTrq+nh41X38jmG28faJtx8CIOef7TaGpvKzEyaWy7HnmM9d+9iL7uHgAeuf4WDn3RM5l96MElRyb
Brk2bWf+dn5B6ewHYdN3NHPbSZzNz6eKSI5Oqq3dPNw9dcS1b7rgHgHM033cHslctZ9qwn09jaUnJ0qkU7
H36EDd+9mNTXB8Cma9ex8swzmLGks+TIpMF2bnzUdbukacfdLZpyXVu2DSpEAux4YCN7tmzjF9
BAIbLfxqvX0jukTSrD1vX3DmysAJASj1x/C6P9n3c8WfC5r9ViN2efl+T+q+JLbAANEIbUEKXFwN9GPdsPtDa3w1rP6OXYdGRFLVVP5Ox2V3dsLQLmQKjHr0pMQJD3xq4Z8Wk4
O6O8gKSRrF1/X3D1u2bXLdLOsBZjNSUS30jX/W+r3IlK9Wovp7hedq3pwf6/EGo8o1UFO/d001i5H5XOlC
MtlGe7Js1it49e8bVJpWtr7t7eJvrdkkHOIuRmnKts2cyY9lBg9qaaZGK0zp3Nu2d8we1tx/We1tS2YS8ucWSVFpFo37wmrhrUtOOaIEiKR9m32SOv2E1y3Sz
qwec5ITbnG1haWPuNJPH7LBrZsuJcZBy9i/rFH0DKzo+zQpDF1LFrAYS99NpuuXUXfPrt0sPPEJzrDrE80WqN
nQsXsiKFz+LTdeso6+3h84Tj2bmkJ0/0oGoqb2V5Wecyuab72TbPQ8wa/kS/kS5h2ziuaO9rJDU43qOLiTQ1/4
DDZduw5IdK4+ho6DF5UdljTMwLr92nX09eTr9uWu2yUd2CxGqipa58deM5r0rIbvlZ7MFtvY6uWnoe7XmYtXz7M
MDMpYvpOGghqS/R/R2GOk3tnNmc9BTVoqEIKNHHqGxpuCtqH8ch0bXcE42TyFJjKZHBJbAN3uYj9irYWg/cGpcZiDpyWVpUsf+ouzzUbXwgbJTSO3M
MDMpYvpOGghqS/R2Gw3qdrR0NTIrEOWMGPplJKNHqVd00jrfNmc9BTV7NozXH+ttCYGpuamL1i6cAO
m4YmR5mpNrlulzQd2dOpqhpbmssOQZqQhsZGcLtFNcpDtzRdRYS/LbRfLEKqXrhulzSdeM5ISZIkSZIkSYW
wGClJkiRJkiSpEBYjJUmSJBXCYqQkSZIkSZKkQliMlCRJkiRJklQIi5GSJEmSJEmSCmExUpIkSZIkSVIhLEZK
kiRJkiRJKoTFSEmSJEmSJEmFqNliZER8OSI2RsSNI0x7x7d0SkiFhYRmySJEmSJEmS9l/NFiOBrwAvGNcQXCFUqN9t3+XsLQ3m6YPYKm5rjuVtWtdCBQ
wH3FB2QJEmSJEmSpImr2WJkzz4DvDjtVRuKaTTIqxFf4O4nGk1M2Qmahy8IdEkdULMPNm5zyQRAomBhsm4qPuQB8d4BUIuqCa3Cx7yB0gXIT2Aie
U4yMiA7gz4EPjXP+t0bEVRaA1ZNm6obnDQB5qjqgXmqemCeqtaZo6oH5qnqgXkqjHnRjqgJAOA66PiL
uAZcA1EXHQSDOnlM5LKa1JKa3p7OwsMEpxMExpfMxR1QPzVLXOHFUdL/zVBe9qDu6qB5qnqgXkqRHhPcwR0pfQuTmCEqbGsVuNwWE4pTR+f2O6dmvEANf7ckvFTqptUb0MNH2TwdTX0anwrTxL2HnqUJO1kOnbh8ZqcsKlpWfGM4tqdQwqJXS7+0YyHlPz0S+NnfgrZLGa1hSAdjX1z9WePMKhV1xNlePKR8H2Nk
KUmSJEmSJKkQFiMlSZIkSZIkcJipCRJkiRJkqRCWIyUJEmSJEmSVAiLkzIkSZIkSZIkSZIkYTFSkiRJkiRJiUiEsRkqSJEmSJE
mSJEkqhMVISZIkSZIkSYW
mSCmExUpIkSZIkSVIhLEZKKiRJkiRJKoTFSEmSJEmSJEmFqNliZER8OSI2RsSNFW2fiIhbHbIuKGiPhORMwtM0
ZJkiRJkiRJ41ezxUjgK8ALhrdRdBByXUjoBuA14fBSZIkSZIkSZqYmi1Gmi1GppQuBuYxaklt4rFBSZIkSZIkSZqYmi1GppQuBuYxaknv3slsKzwwCRJki
RJkiRNSM0WI8fhrfhzcAPyg5g5CkiRJkiRJkiRJ0vvMjpUzTEyyFzoVxFoVqVzzhIwuqDAnq6z4XdOhnIuLEqCcmZTy9wNlwgdRsLejGiHqIl4dtGicDynuzpQdGt3DE0iPwAYtoKtMFI1f1EN1HQbSeZaEjP5
PVQ/MU+nA0FR2APsjIl4Ml4Av1pBUIwdRkppZ9nxSJIkSZIkSRq/mYFIZOR/Bh9wHaRNqXgHUyTr5ugpUoixBcnBcUjnHlh
qkJEmSJEmSpHGr2ZGRKaXXjtD8D4mpHoX8r4oUHIkMmSJEmSJGlK1OzlSEmSJEmSJEkHlsKLkREXEJOKPp1JUmSJEmSJJEmSJEmSJJEmSJJ
WrkGJkRFwSEbMjYj5Il5bkiRJkiRJUm0oamTenmTJEmSmzamqAUUVI
5siYgnwKuB7Ebb2mJEmSJEmSpBpSVDHyr4ElkoKmIF0kpXQBcUHF/Pf
DyIl5bkiRJkiRJUm0opBgZEZ8Z8KiEGSJEmSJElSuYo6TL19leRJEmSJEmSJE
mSJEmSVKJCRkaSJEmSJEkSsilJuihoZZE4QRSDJEmSJEmSJEmSJEkSbJEk
BIVNTLy48B1EXEJEMDpwN9GxAzJwXFImSJElSkRMUKIEmSJEmSJEkaUimSJEk
qV1GHafe/1ibgMeDwNeJEmSVLkZrS5HfpxVMD5KkSZ0sD
KqXkxWokSZIkSZKkaaqow7FvTvYhKkZTIUmy6wJGSJEmSZKkoOw6OW9dLJQ
vzP8kSZIkSZIkSZIkSVKTCNTSl8t4nUkSZIkSzIkSZIk1a6gFiqvL0mSJEmSJL
KenSJEmSVCEmSJElS1ZX
/19c5deRJEmSJEmSVOOqWoxMKT2Y9XqVcPXAHieF3RJKJGaj55RMyOiPdHxOcj4meT
uwHnhVNV9bkiRJkiRJUm2paTEqXGx1MBB7mcR0M/MY3UKR0PEBFfA
h4EDkkp7a7a+Uzbfr+RUuoF9BFF7rMQKUmSJEmSJEmSJEkS1P1S5S5Gnu
HhgRX46IjRFxFxZ0Xb/KzXb/Pq4Jz//Pq3L8kiRJkiRJkqZiD+m3TiJh38F+DzwtYq+2SReQ/uh
a3cXt153Bxf/1yW0drTxnJedzuHHraSxaTJfs1RbUkrcceN6ZvLW8vmfKI2mf0V52aBIAjz3yON
dffiO/wNZxnGjYYPFvc//PprDr2MCKi7NA0jfX56X
cvZee2XTznt0/nqNVH0tbRWnZtbRWnZoOoBt3vgY11++lst//BUn2OSMnLKV0aUSs
GNJ8/DvDM/PZXgUuwGFmYdVfdyqfe/fmB+1de9Bv+4ot/ypEnHl5iVNLUWr/uLj76tk
//atPPk5aOTIKenh6+/+/ofm8Pj/6+NxVsl/SN6Lz+4Fd86Lz3sv
KYFeUFpWnvznUb+OjbPkVvby8A11x11Q/6+B9w8jNWDQ93T3879D93t/
HJ0kjQ1qn2Y9lRbnFJ6ML/9L/9ELC4zGCnuBXY/zGeeqWZdRq
75EHHuWib/1s0FZ7lrLSRfNfrP1DwNUNnrSw48zoTuqcTwvTL3TsWxbadZlVFJGWu++Xag
0G184BEu/u+fD2p79KHYiKHN3Lfedb2kA0eu9FSMHpJQSkEabHhFvjYirIuKqrS
DkdEUzXowTN0xoTASPl4jTNz37maf2LYMTDsQ+UQ7TN0frVMMLvgoZoOCD7XfO0dsRICXYA5txEmKfSg
aHeipEPR8QSgPz/xtFmTCmdl1Jak1Ja09npoWuT1dTcxAt/57mD2hobG1njISoTZo7WpmPWPIHmlsFnsDj

z7BfS1tFWUkTlMk9rS+eSBbzgNc8Z1LbgoPksP3x6nzPSPK1/7TPaOetNLxrU1tzazNEnHVlSRFPLHK1fJ556
/LDzo7/oDc+npaWlpIiqxzytDYsOXsgZr3jm4LalnSxbOb3X9f3MU+nAULPnjBzFhcAbgY/l//+n3HCml6NPP
pL3/eO7uPR7v6Sto42nvfAprDrmsLLDkqbUYU84lL/44nv4xQ+vZOvmbZz+klM56sQjyg5LAqCxqZHfeu1z
Wb5qKb+6+CpWHnMYT3r2SXQuWVh2aNKknfDUY/nTz7ydy753ObPnz+Zpv/UUDnvCoWWHpWlu5TEr
+OC57+HS/7ucndt28YyXnMaRJ64qOywdwJqam3jxG57PoUct5zc/vZpVx67kSc8+iYUHzS87NEmaMjVbjI
yI88kuVrMwIu4DPkxWhPxWRJwD3A28qrwIp5+W1haOO+Vojjvl6LJDkaomIlh13GGsOs5Cu2rT3IVzeNoL
n8rTXvjUskORplRbRxurTz2e1aceX3Yo0oCGhgYOP34lhx+/suxQNI3M65zL6S86ldNfdGrZoUhSVdRsMTKl
9NpRJj1nlHZJkiRJkiRJNazezhkpSZIkSZIkqU5ZjJQkSZJUCIuRkiRJkiRJkgphMVKSJEmSJElSISxGSpIkSZIkS
SqExUhJkiRJkiRJhbAYKUmSJEmSJKkQFiMlSZIkSZIkFcJipCRJkiRJkqRCWIyUJEmSJEmSVIimsgOQ6sXu3V3c
dMOt3HjdzcxfOI/VJx/zcfOI/VJx/L8kOXlh2WNMjDD21i7bXruOeu+znq6UFct/po5sydXXZY0iC33Xln1199Ez09PZx40
rEcfdyRRETZYUkDdmzfyU033NMzfyU033MJNN9zKQQcv4oQnHsPSPS5UvKDksa5IH7H+KGa9bx4P0Pc/RxR3L86qO
bOj7LCkASklbrnpdq6/5iYahGho48aRjOeqYw8sOS1IINsBgpdbCGhgZOe+fqXDmt/8ZD+VdL0ZDFSGofG
xkZe+8bf5m3vehOLFi9k9k9ZrjOPFrn+IJxx5RdmjSgWHHHMy5X/8Ez3zuaSzonM+rXvdSPSvx9sBr1oyyQ5M
GPPFJx/OJL3yYww4/lGWHHMxffvy9PPXa8oOS8xrQ2trC2971CPdAanasfK
IFZz3H5/mqU9bw8JF83njW1/NO977FtraWssOTRrwlNNO5q8q/+T6WH7qUFSuX87S8q8HPfZCTTjmx9rIjmx7LAk1YBI
6cA/LGrNmjXpqquuKjsMHSAefWQQ7e1tdMwYXMwY9WqF+31JWHNUU2n37i2b9vB3HmzR7twzYQuW2yeai
ptfXwbfSkxd96oV3s3T1Wqvr4+Hnv0cTpmdNDe0TbabK7zVapdO3ezc8dO5i2YS0PDiONM7EtVuscf30JE
MGeO63zVtQnlqUbm5VWl/bRg4fyyQ5D2qa2tFER9Rqnmz584VOwRq6aJSydOO20eqh6emqnmzCeqh6Yp9KBoe6Kkc
AZwIaU0qaUUjfw38CpJcckSZIkSZIkaQz1WIy8B3B3hKRHERADPAW4uOSZJkiRJkiRJY6i7YmRrLV
k7+G8UoOSJEmSJEmSNKamsgsgOYiJTSh4EPlx2HJEmSpPGru5GRkiRJkuqTxUhJkiRJkiRJhbAYKUmSJEmSJKkQFiMlSZIkSZIkFcJipCRJkiRJkqRCWIyUJEmSJEmSVIimsgOQpEmSJEmSVIimsgOQ
kqRFPZAZSlr6eH3q7dQRAQNrW00DQ73g4RTRrW00NDaO73HdPXRv307q7aZ7q7aN51gwaW1urHKmms949u9u+nr7i8iYiam2sbSlrHKmms949u9u+nr7iYam2lsbSUiB
k3v6+mhe9t2Um8vTTNn0tRmPqpYqa+X3q4uUl8vjS1tNDQ35+L8qvjS1tNDQ35+19dG/fTm/XHpo6Omie0VFypJrO+nq66
e3qlhoaaGxpJYas81NfH93bttO7Zw/NMzpo6jBfVayUEn17uujr7qahuZnG1rYxH9O7p5ue7dsBaJo5k8aW
5mqHqWku9fbSu6eL1NdHY2srDU3jy7meri56tu0gGhtonjWThqZpuwkqScpNyzVBz+7d7LhvA707dwDQ
Mnc+7UuW0djcsu/H7drF5rXr2H7Xvdnj5s9j0Skn0TJ7VtVj1vSzZ9sWdty9ntx9ntTXC9HAjOWH0jJn/kBBsmf3b
h5bdyvb7tgAQPOc2Sx+yhpa5swuM2xNI3093eze9eze9eze9eBC7Nz0MQENLKzMPXUVDcwvb7r6XR69dC319NLS2
sPjUJ9PeuaDkiDUd9ezexfa776SvazcALQs6aV90MI154byvp4dtG+7m0etvhL5EY1sri089hbaF5quKkVJiz9
bH2XHvBujrg4YGZi5fSucuaM+pnv7Dh655gZ2PZT1v+0HLWbhSSfQPHNGUWFrmunr3sPOhx9gz+ZHAG
hs72Dm8sNobGvf5f8hu4tWwGYteow5h17FE1tYxfcJUkHrml3mHZKiT2PPTJQiATY8/hmerZ
vG/OxuzY9OlClBNiz+TG2bbiblFJVYtX01dvVxY578klIkQOpjx7130ZtvTAN0PfrYQCESoHvLVrbceiept6/ocD
VN9ezcOVCIBOjb08Wuhx+ge/sOHr36+myjGujr2sOmX19Nz+7doz2VVBWpr4/dmx4aKEQC7HlO707t++
9v2VrXjjP1uW9u7vY9Jtr6OnqKjxeTU+9XbvZcc/6gT6Tvj6237t+0Dp/qJ0PPjRQiATY9dD7HzgoWqHqm
msZ8eOgUIkQO+unex6dOM+t4NSXx9bbr1joBAJsO3ODXQ9srmqsUqSat/0K0b29dG9bcuw9u4d20eYe7
CuR4evOHc+8BB93T1TEpvUr6+nm9TbO7gxJfq6924c73l8eB7vfPhheru7qx2eBGSnERiqZ/s2+obmLtCzYy
e9uy3uqFipt5fubVuHtfdWFMZ7du4aNr172w7Lh/eOFxh8VIVVHPrh3D27Zt
Gf57tULvnm52VhTN+3VtGd4vS5Kml2lXjJyGBppnDjD+Mtblj7MNaWucNP1ymffEiz3uiKdfQ1EQ0DD+PaU
PT3lMJjHQ4dlvnQhqbzUcVo7Fl+DlKG2fMGPEcvI3t7TS27vtUGNJUi8ZGmmfOHNbeEGmmfOHNbeWHF4YFP78EMFm2
Z00GC+qiANzc0w5JzQRAPRPPr5+DoOWjSuNmmqNLYPP5du04xZROPom5ONzc20L+oc1u4priRJ068YG
UHr/IU0tO49v0nzrDk0zRx7pdjWuZCOgw+qeNxMZq9aQTTEPh4l7b/G1jZmLF8B0b+IBh3LDh10QvvWBf
OYceiygftNHR3MfcIRwy7MIFVLY/sMWuYvHLgfTc10HLSU5pkzmH/CsRD97U0sOuUkmtr3fV4paapFQw
NtnUtoqDgndMvc+TRV7IBsmTOHeccfM5CvDc3NdD7piZ7PTIVpbG1jxrIVewuSECxYvmLEHT79ZixdQuuC
eQP3WxfMY8bSJVWONVNNZ04yZNM/Zm3MNLa20dR5ExOibk9HYwNyjDqep4iJ2Mw5ZRtvC+VWNVZJU
+6blEKrGtnZmrzyS3q5dEA00traNa3Rj84wOOk85ie6t20l9fTTPmjniiAppKjTPnsvsI46mr3sPDU3NNLa1Df

rB19TezsInnsicw1eSentpnjmTpg6LPSpOY3MzHUuW0za/k9TXS0NLG40tWdFn9hEraT9oEb1dXTR3dNA8
a/joNKkITe0dzFr1BPr27CYaGmhobR80erehuYk5R6yiY8niLF9ndIw4mlKqloigZe58Gts7snV+cwuNrW0DF
6wbSfOsmRx02lPo3r4dUna/sW304qU0WY3NLcxYdih9nYvzq2m3DdrRM5qWuXM4+NlPp3vb9my0+ux
ZAxcQkyRNX9OyGAnZyIeGCawIG1taaHRvngoQETS1tcM+rlLY2NJM4wLzUeVpaGykYYTTXDQ0NtI6d04J
EUnDNba0DBTKR9LQZL6qXONZ5w/V2NZqAVKFamhsoqFj/3fWNLW3e3SEJGmQaXeYtiRJkiRJkqRyWIyU
JEmSJEmSVAiLkZIkSZIkSZIkSZIKESmlsmOouojYBNw9xU+7EHhkip9zMopmnukeyyeyMppRfszwOG5GtfKZ
bqqHas+52jsM++tJ4+26ng+y3GVOfpeNXL91svcUL9xDqROCe7zp9KtfQ5G8tw9dyX1spnuD/qMWaYvnG
Xtc4fj1r6ToxldEXEM6E81cimRTGyGiLiqpTSmrLj6FdL8RjL5NRTzMZaHfUUK9RfvJPl+z2w1cv7rZc4oX5irZc
4R1NL8RtL7cYxEfUYez3GDMZdi2rpvRnL6GotHo3Nw7QlSZIkSZIkFcJipCRJkiRJkqRCWIycuPPKDmCIWor
HWCannmI21uqop1ih/uKdLN/vga1e3m+9xAn1E2u9xDmaWorfWIarlTgmoh5jr8eYwbhrUS29N2MZXa3
FozF4zkhJkiRJkiRJhXBkpCRJkiRJkqRCWIwcQUS8lCJujYg7IuJ9I0z//YhGxHXRcQvIuKYvH1FROzK26+LiHO
rHUvFfC+PiBQRayra3p8/7taIeP5kY5lMPGV8NhFxdkRsqnjN/1cx7RJjKFMf9JRKyLiBsi4uKIOL
RiWm/Fe7mwBmIdcTnIp0157lUj1mrk5WRjrZivkGV6vCaTu/VqMt9VPRrP+42IV+Xf800R8R9FxzgZ48jh0
yPimojoiYhXDJlW6DpjkrEWtq6Y5Dqt1j7Tmln/7kfMrRHxn/n0X0XEirx91HVbRJycw/viIjPRURUMY7XVc
RwXUT0RcTqfNol+XP2T1s0RZ/Jfi/HE/lMJhNLRKyOiCvyfvSGiHh1xbSvSMGis9l9Xhimahq5FgRqpEHRZh
k3LXaD9VMPz/VIuJd+XJ6Y0ScHxFtBb/+lyNiY0TcWNE2PyIyyj/TiyAxqBO4GVQAtwPXDMkHlmV9x+KfDD/PYK4MYiY8nnmwV
cClwJrMnbjsnnbwUOy5+nscR4Cv9sgLOBz4/w2PnA+vz/vPz2Fnttw/WTFte7Vj3M9YR1sOpj
z3qhjrlOblVMSaz1fIMl1U7tbj32S+q3r8G+d3fARwbX9/CSwqO+4pfn8rgBOArwGvqGgvdJ0xmVjzaYWsK
ybTL9ToZ1oT69/9jPkPgHPz26+p+HxXMMq6DM5eawcry/n8rgBOArwGvqGgvdJ0xmVjzaYWsK
IkcER++2DgQWBufv8rDFmm6y3HaiTu/c6DWo47n1ar/VBN9PNVeO9LgQ1Ae37/W8DZcwOnBS5bIGf
Bx4X377fcDflxjL84Cm/PbfFxXLaPHk7cuBHwF3AwvLziP/9v3nyPLzikP5Q0ppa8XdG
UC1Trw5Ziy5j5B1ALsr2s4EvplS6kopbQDuy4EvplS6kopbQDuyJ+vrHim2nhjGcnzgYtSSptTSo8BFwEvqFKclclcaTWz9LKe3M71
4JLCsgrpFMZjmoRu5VK9ai1doyPV71lLtTpZb6uyKM5/2+BfhC3m+SUtpyTMZ4cviuldAPQN+QaQtdZ0wi1sJMZkVV
NrkSbTL9TiZ1prfdh4lskzga/mt78oiYgRU0qrJrDZ/7GRM+XI8wc9kUrGklG5LKd2e3/4tYd2e
334A2Ah0jucDmGJTnmMFqaf+vFK99O2V6qmfr4YmoD0imoAO4IEiXzyldldCmweUhz5TL5VcbXX1UllpTSj
1NKPfndQtebo3w2AJ8B3kt523raDxYjh1sK3Ftx/SK4Clqe+MOIuIqPuJ4d4Clqe
Uvr+/jy04Hij4s8m9PB86/u2IWL6fj51q+/u655Dtoe/XFhFXRcSVEVHtFc9kloOiP99aWmbHUmvL9HhNNn
fr0WT7u3oznu/4SODIiPhl3g3g/V00bFZJafmuzT9qGodcVk+oVa/0zLXP/2G0/MA/PkG4RbgAX5tJHWbUvz5
9nXc051HP1eDZw/pO3f8kNOPzjOAlc1luOJfCaTjWVARJxCNuLszorm+j+a/XT8TEa37+5z7oRo5VoR66s+n8
rVrtR+qVGY/P6VSSvcDnwDuAR4EHk8pXVR0jCOr9vbu/1fU9/CWl9oZWeykaR9J1M3UU9xMoHjNrDjIAY7h7M9vqYfExRU3vY+FSl69yP6HOpj+Avdn
kB1KuU0heAL0TdE7E3ZrykKM0REA/BpssrYM/OZ5/BtcsJpSOnaS
R7T16dhVfb8pExOuBNcAzKpoPTSndnxdP+30pcTtEDBkOoalItLLNjqbVleiJGyd0DzoHwXU1AE9
mh2s8k2/t9aUQcn1J6vNSoNFTNrSvqqV+ol/XvGEZct5UVTEQ8GdiZUqo8Gc1wgNzl2qBCFd4dHDKRIAeHDq35ujsXGdtpSRp8XXhMIbbs12AONDjzpv31UjU+8H0R/mZjOo4spkWh7lQjO3IA8PT8JDEJP3yOJcfmCWOwt+/gyQ4+Jhmq+BJpW5NXTEyEHRUFaN+ZaaMmiqMwLYgpThwmgAJy1f5vtvmJ9XyrbFCU6RzI84YBdBBTdOSCt7Yo9q0v39sMAhjyNiFX5Q8u6TgjoxLkiVp55X3AqlFKz8eGGpaIQkt6Xwg34lAkB

ppY9N4insp2tERDwVeDFwUkrpBOAM4N5yo6qeKejbzwYsRpbrfOA1Q9peA5w/BX3TqIpY/6aUJlNMfCb
5ukW1qV7625TSAymlCe1Ayu3371sdkPq3s44DNgN/CFOSX1JVWYycZiJiVUT8MCKujojLIulJeftXIuJzEXF5
RKzvH1kREQ0R8U8RcUtEXBQR/xcRr4iId5BtJPwsIn5W8fwfzUe+XRkRi8t5l6plKaWNwFuBP4pM5R7nUy
Liioi4Ns/Fo/L2syPiu3kO3hURf5SPaLs2z7X5+XzD8jsfvfBS4BP5XsNVYywH50bEr4CPl/IBaSpdDjw1v30scC
OwLSLmRUQrcDRwTT59ZkR8O+/rvhERARARz8nzbG1EfDl/3CAR8bw8b6+JiAsiYuaQ6Ysi4ur89okRkSLikP
z+nRHRERGdEfFfEfGb/O+0fPrAKIw8b6/MY/mbISMlhsU/Wj+t0iwBHkkpdQGklB5JKT1QMf3teQ6treiTB
o1WzEc9rMhv/25kI36uj4ivD32xiPhI3qc1RsR78ry6ISL+qmKeD0TEbRHxC+CoEZ6jMSI25Pk0N7LRF6fn0y
6NiCMiYka+bPw6X1bOzKdX9u2def99U0R8KSLujr0jkxoj4l/yaT+OiPbIfoOsAb6R99vtE//YNQnfBl4UES2Q
jWQl61MuG9I3vTLPzesj4tK8rTEiPpm33xARb8/bT46In+fr3x9FxJK8/ZKI+IeIuAr444h4SUT8Ks+pn8Qlvykj
4vsRcUJ++9qI+FB++68j4i357dFyf3v+f8TfuRUvM2i5zD+D3wfelefm06fs09ZUmkh/O2JfNh7588zN+8pHI
+J38/avRcRz8+XhExW5+Hv59IHR4ZH9FvhWRKyLiO/k+b+m4jUGbWPFCL9vJ/uh6YBwBbBAUhuXX2RHx3
5Ft/9weEQPbORFxTmS/BX6dr49H7dulqWQxcvo5D3h7Sulk4E+Bf6qYtgR4GtmexP693b8NrCDb6/YG8g
37lNLngAeAZ6WUnpXPOwO4MqV0InAp8JaqvhPVrZTSeqARWDRk0i3A01NKTwQ+BPxbxbTjPQxPLxSbHgZ
35fFcAv5vPMyy/U0qXAxcC78n3Gt450nwVr7MMODWl9CdT9oZVinzDoyeywt+pZLnyK7J+bA2wNqW0J
5/9iWSjCI8BVgKnRUQb8BXg1Sml44Em4G2Vr5EXVP4EXVP4COCOldBJwFTAod/ICfFtEzAaens/z9Ig4FNiYUtoJfB
b4TErpScDLgS8x3GeBz+ax3DdDk2rD4R+mnVZ4fA8vzH/z/FBHPGDL9kTyHvkjWL40qIo4ly7tn5+vcPx4y/R
NAJ/Am4DnAEcApwGrg5Ig4PSJOJhvlthp4IVnfOkhKqRe4F9kqyvnkZWvH96ZEX55Sml24EPAD9NKZ0CPItsw
3jGkKf6cD7PsWQFrkMqph0Bfq90GfCGf9jjw8pTSt8mWk9fl/faufX0eqo6U0mbg12RMH0CWL99KKaUhs34IeH
6eiy/N295K9vtxdT4y7RsR0Qz8I/CKfP2r9f/CKfP37ZbL1eb+WlNKalNKngF8AT8nX898E3jtCiEe5eMcoAc4LW9/On
BpRDyPEXJ/yHOM+Du3wqDlMqV0F3AuWX+9Oq0V02QhxqXwT6W/H05eN5pdk+XcssJ4sByHLp8uBc4At
+Tr+ScBbIuKwIc/xB8/xB8BjKaVjgA8CJ1dMG7aNVjEdFIts6/cJRZVgOvBo4HXh0RyyM7HcoHgaeQ5fAT
KuYfqW+XpoyHIU4jkY3WORW4ILJBPwCVo3y+m1LqA9ZV7IF+GnBB3v5Q7Ht0zR6g/7xlV5MdjivtjznAVy
PiCCABzRXTfpZS2kY2sm0L8L95+1rghHHkNzCu5eCCfANcB4bLyb7vU4FPk+0tPhXYQrbx0O/XKaX7ACLiO
rKN023AhpTSbfk8XyU79OUfhjZxAoAWsKtN2F/m+dRCVvQcKY7TgNPJiuwvAIJsYxqyQ8iOqcjk2TFRyz8Z+
e3/AD45Rvy/GCEOlSSltD0vAD6dbEP3PyPifSmlr+Sz/Hf+/2qyAsm+PJusr3okf+7NFdM+CPwqpfRWyEbuA
s8Drs2nzyQr0MwCvpMXw4ml0TZeLiPL28OAvyPb6rfhz4Df59OcBL429IzjbGFxshOy3xMvyWH8YEY9VTN
uQUrqu4r2vGOO9q1j9h2r/T/7/nBHm+SXwlYj4FnvzsCjv6xqBBye5z5Yvcjv6xqBByue5z8rbi8jW
0aWkPWrG0Z43cuAd+TTvg88N7Jz5B6WUro1Hx05Uu5XjvAZ63fu/iyXqhET7G/H05eNpr+fvJuswPnWiFh
KVlzckffDJ1SMup1Dlou3VTzH08h2OpJSujEibiqY5jaW9qU9/+23FLgZuZuGiU+S5OKW0BiIh1wKFkpzD6ef/vi
li4ADgyn3+kvl2aMhYjp5cG4PGU0upRpndV3I5R5tmX3nTvl5R5tmX7oq95b2YXxpFRKwky5GNZIfK9vsIWdHxZfmhUJd
UTKvMz76K+31kuTqQRvIanWQnnNKgynhdK9u8Mz76K+31kuTZWfvcba74d43gLqh/95408nuww7XuBdwNbgX+rmK8yv/an/wrgopTSa8eY71KyjaJD
yTbq/4ys4P79fHoD2Sig3YOePMbdFU80fhUo39FxCXBJRKwF3kg2h2+hb2foeV318Pg49iaRvHy/yGbAATY/Hz
jIoC/Syn9c+VMUXFxpzFcSjYi+GCyURLvlTtnXn8hPchGM9465PnHe6qWobnrIdm15X+Az0TESUBHSunqo
TOklH4/souDvAi4Oi8CjSSAm1JKQ0cf7yP0BrWtKd6lD0KEwzo39FxCXBJRKwF3kg2+hb2foeV318Pg49iaRvHy/yGbATY/Hz
jIoC/Syn9c+VMUXFxpzFcSjYi+GCyURLvlTtnXn8hPchGM9465PnHe6qWobnrIdm15X+Az0TESUBHSunqo
TOklH4/souDvAi4Oi8CjSSAm1JKQ0cf9qtc//4j8OmU0oUR8UzgL0eY/zdko9zXk218LyQrlvfHOGLu76eRlk
vVgQn0t5Ppyy4l21l5CNkIy5cBr2BwP/n2lNKPhjz3inG+HbextC+7Ukqr850xPyLLdfvxVH6ttTSo9OV
dCSh2lPIymlrcCGiHglQH5ekxPHeVe6dxWQbIP22kY2skMYtIjrJDnH6/AiHes0B7s9vn70/zztGfg/
k6gSXA9Wvy8lOPbE5pdSbF2fmsvfQqX25FVgREYfn999ANiKs0pVkh3Qfh3QfDgPnnDqS4S4DXg/cno/A2Ux2a
Gz/6MUfA2/vnzkiRiqWX0l2CDcMv6jEaOyna0REHJWP+u63mmwUzb7cBZYUP/4kstGJAD8FXhkRC/Jp8y
se80OyU618PyJmkW2YvLl/pG1ELI2IRWQbz2dFdo7GWcBLRonh12QF/b68WH4d8d8HvsHV32I7Lzr/WfZ/
WJIzzHL4FX5dOfB8wb432DuVsTUkrbgZ+RHVJ9/kjzRMSqlNKvUkofAjYBy8mKG78X+cVo8hy9FeiM7OIiR
ERzfsqBkVT+HnjjKLHtIdvB9EqyEemXkR1yW5mbI+V+pX39zh2NuVnjJtjfjqcvG1FK6V6yYvgR+amIfsHwXH
xbfqoCIuLIEQ4Br+wnjyHbiTaoWc1ED8iMd3gG8O8Z/IbDfAM+I7HzqTez9nTla3y5NGYuRB7aOiLiv4u9PgN
cB50TE9cBNwFgnZ/4vsnOTrQP+nex8UVvyaecBPxzXz0jG0J8sMHIuIm4CdkhZe/GmG+jwN/FxHXMrG9vqPl
9zeB90R2QvJV+5hPB561ZBsIVw5p29J/iOto8sLLm8gO6V9LNgr33CHzbCInJ+fH1J1BYPPt9M/311kIyP6
N0x+QTZCt/9w1XcAayI7sf06sgskDPVO4E/y1zmcvX3xvthP146ZZKehWJd/h8cw8mivSv8FzM/7zj8iP6Qv
pXQT2bn2fp73Y5+ufFBK6QLgX8jOG3UZ2WH19V+R5/G1gVkrpGrLDYq8HfsDew64Z8lxdZAWf/mXoMrKN
37X5/Y+QnVLjhjzOj4zwNH8FPC+yE+m/EnIbCN6X74CnBtewKYWnA+cyCjFSLJz663Nv9/LyXLqS8A9ZHlx
PfA7efHwFcDf523XMfpVqf+SrO+9Gthz3d3d+W3l+X/SSn9mBFyf8jj9/U7dzT/C7wsvIBNLZtIfzuev
mxffsXew64vIztktn+H45fIcuyafDn5Z4b/zv0nsmL9OuBvyRO0Kmk/zwm10ppRQRrwFem1KykK6aF9kFb
3pTSj35qLgvjuOUGIIh/J2rWhDZxUeaU0q788LiT4Cj0t4L7UlVUdEHNgHfAb6cUvpO2XHwBnjq34mEiYmZ+7pUFZB3VaSmlh8qOS5Kmk/zwm10ppRQRrwFem1KykK6aF9kFb
3pTSj35qLgvjuOUGlIh/J2rWhDZxUeaU0q788LiT4Cj0t4L7UlVUdEHNgHfAb6cUvpO2XHpwOf5JjQe34uIu
WQnEP+IP9AkqRQnA5/PDyF7HHhzyfFI43UI8K2IaCC7EMNbSo5HquTvXNWCDuBn+aHcAfyBhUgV5C8j4
gyy81L/GPhuyfFomnBkpCRJkiRJkiRJkiSpJkiRJkiSpJkiRJkiRJkiSpJkiRJkiSpJkiRJkiSpJkiRJkQIi5GSJEmSJEmSCvH/AZfe6PAvew3LAAAAAElFTkSuQmCC\n"
},
"metadata": {
"needs_background": "light"

```
      }
     }
    ]
   },
   {
    "cell_type": "code",
    "source": [
     "sns.pairplot(data.head())"
    ],
    "metadata": {
     "colab": {
      "base_uri": "https://localhost:8080/",
      "height": 1000
     },
     "id": "fCEOEwfILBeR",
     "outputId": "02920ebf-828f-4225-c329-6565ff888f1d"
    },
    "execution_count": 19,
    "outputs": [
     {
      "output_type": "execute_result",
      "data": {
       "text/plain": [
        "<seaborn.axisgrid.PairGrid at 0x7f39ed46a410>"
       ]
      },
      "metadata": {},
      "execution_count": 19
     },
     {
      "output_type": "display_data",
      "data": {
       "text/plain": [
        "<Figure size 1440x1440 with 72 Axes>"
       ],
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAABYcAAAWHCAYAAAAfiMnvAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAgAElEQVR4nOzdcZRe91kf+O8Q4gpQk5Y
2HEgTUAvYacMxJgHSLouT3fgkXUMPyTab7THkLKF7XNitt8F0Q0u3qWNIS9Vi4m1S0m1LA1YanYDNceM
4KrZJbFlOI6Ewtpx59g+9Eq8VSTMjve+8c+f9fM65R3N/772/ee473/e+zpN77q3uDgAAAAA82VKAA
AAAALDxNIcBAAAAwAwzEsAAAAAmEOsbwwAAAAAmEOsYDgAAAAAzEsAAAAAmEBsb3AAAACTnOzhGLUAA
GLDs1Fc3j37t2dx
GLZyGXd5NQyo2XdZNUyg+WsyKplBsu6yallBstZkVXLDJazIquWGSzrJqeWGSynNRfN4SeffHLWJcCq5JSh
kFWGQlYZAjllKGSVoZBVhkBO2UzmojkMAAAAAMBzaQ4DAAAAAMyh82ZdAACTt7LS2X/wSB4/tJxLLlzM
zot2ZGGhZl0WfAVZZShklSGQU4ZCVhmKec7qPB/7vNEcBthiVlY6H77/87n17n1ZPrqSxe0Luf3G67L72kt9
mbOpyCpDIasMgZwyFLLKUMxzVuf52OeR20oAbDH7Dx458SWeJMtHV3Lr3fuy/+CRGVcGzyWrDIWsMg
RyylDIKkMxz1md52OfR5rDAFvM44eWT3yJH7d8dCVPHF6eUUVwarLKUMgqQyCnDIWsMhTznNV5PvZ
5pDkMsMVccuFiFrc/9/S+uH0hF1+wOKOK4NRklaGQVYZAThkKWWUo5jmr83zs80hzGGCL2XnRjtx+43U
nvsyP3x9q50U7ZlwZPJesMhSyyhDIKUMhqwzFPGd1no99HnkgHcAWs7BQ2X3tpbnmba/KE4eXc/EFnizL
5iSrDIWsMgRyylDIKkMxz1md52OfR5rDAFvQwkLlqqXzc9XS+bMuBc5IVhkKWWUI5JShkFWGYp6zOs/HP
m/cVgIAAAAAYA5pDgMAAAAAzCHNYQAAAACAOaQ5DAAAAAAwhzSHAQAAAADmkOYwAAAAAMAc0
hwGAAAAAJhDmsMAAAAAAHNIcxgAAAAAYA5pDgMAAAAAzCHNYQAAAACAOaQ5DAAAAAAwhzSHA
QAAAADm0Eyaw1W1u6oerKqHquodp3j9r1XVgaraN1r++7HX3lRVnx4tb9rYygEAAAAAtobzNvoXVtW2J
HckeW2SR5PcV1WtW1u6oerKqHquodp3j9r1XVgaraN1r++7HX3lRVnx4tb9rYygEAAAAAtobzNvoXVtW2J
HckeW2SR5PcV1V7uvuBkzb9YHffctK+L0jyvybZlaSTfGK07xc2oHQAAAAAgC1jLQ939cvyLJQ939cHc/k+SuJD
escd/vTvKvu/upUUP4XyfZPaU6AQAAAAC2rFk0hy9L8sjsjY+qOjsZO9vqo+VVW/WlVXrHNfAAAAAAADOL
M+kO5fJtnZ3d+UY1cH/6P1TlBVN1fV3qrae+qAgRkXCJMgpwyFrDIUssoQyClDIasMhawyBHLKZjWL5vBjS
a4YW798NHZCdx/s7qdHq/8gybeudd+xOe7s7l3dvWtpaWkihcOkySlDIasMhawyBHLUMgqQyGrDIGcsl
```

nNojl8X5Krq+rKqnpekpuS7BnfoKq+bmz1+iS/P/r53iTfVVVfW1Vfm+S7RmMAAAAAAKzDeRv9C7v72aq6
JceautuSvL+776+q25Ls7e49Sd5WVdcneTbJU0n+2mjfp6rqp3KswZwkt3X3Uxt9DAAAAAAAQ7fhzeEk6e
57ktxz0ti7x35+Z5J3nmbf9yd5/1QLBAAAAADY4jbrA+kAAAAAAJgizWEAAAAAgDmkOQwAAAAAMIc0hw
EAAAAA5pDmMAAAAADAHNIcBgAAAACYQ5rDAAAAAABzSHMYAAAAAGAOaQ4DAAAAAMwhzWEAA
AAAgDmkOQwAAAAAMIc0hwEAAAAA5pDmMAAAAADAHNIcBgAAAACYQ5rDAAAAAABzSHMYAAAAA
GAOaQ4DAAAAAMwhzWEAAAAAgDmkOQwAAAAAMIc0hwEAAAAA5pDmMAAAAADAHNIcBgAAAACY
Q5rDAAAAAABzSHMYAAAAAGAOzX1z+LIrXpSq2jTLZVe8aNZvyQneGwAAAADYus6bdQGz9oePPpIf+IXf
mnUZJ3zwzd826xJO8N4w71ZWOvsPHsnjh5ZzyYWL2XnRjiws1KzLYp38HWG2fAaZdz4DrJfMMCTyCrN3r
p/DuW8OA5zKykrnw/d/PrfevS/LR1eyuH0ht994XXZfe6n/2BkQf0eYLZ9B5p3PAOslMwyJvMLsTeJzOPe3l
QA4lf0Hj5w4uSbJ8tGV3Hr3vuw/eGTGlbEe/o4wWz6DzDufAdZLZhgSeYXZm8TncCbN4araXVUPVtVDVf
WOM2z3+qrqqto1Wt9ZVX9cVftGy/s2rmpgnjx+aPnEyfW45aMreeLw8owq4mz4O8Js+Qwy73wGWC+Z
YUjkFWZvEp/DDb+tRFVtS3JHktcmeTTJfVW1p7sfOGm7C5K8PclvnzTFZ7r7ug0pFphbl1y4mMXtC885yS5
uX8jFFyzOsCrWy98RZstnkHnnM8B6yQxDIq8we5P4HM7iyuFXJHmoux/u7meS3JXkhlNs91NJ3pvE/+UEb
LidF+3I7Tdel8Xtx06Tx+/bs/OiHTOujPXwd4TZ8hlk3vkMsF4yw5DIK8zeJD6Hs3gg3WVJHhlbfzTJK8c3qKp
vSXJFd/96Vf3Nk/a/sqo+meRQknd197871S+pqpuT3JwkL3rRiyZVO0yUnG5eCwuV3ddemmve9qo8cXg5
F18w30/eHWpW/R3nz1CzulX5DJ6anM6PoX8GZHXjDT0zsyKrsyGv6yOnTMMkPofn3ByuqqUkP5Zk5/h8
3f3fneV8C0luT/LXTvHy55K8qLsPVtW3Jvm1qrq2uw+dvGF335nkziTZtWtXn00tMG1yurktLFSuWjo/Vy2d
P+tSZm7IWfV3nC9DzupW5TP4leR0vgz5MyCrszHkzMyKrM6OvK6dnDIt5/o5nMSVw/8iyb9L8pEkX17D9
o8luWJs/fLR2HEXJHlZko9VVZJcmmRPVV3f3XuTPJ0k3f2JqvpMkpck2XuuBwEAAAAAME8m0Rz+6u7+yX
Vsf1+Sq6vqyhxrCt+U5A3HX+zuLyZ54fZ4fH1qvpYkp/o7r2jq5Sf6u4vV9VVSa5O8vAEjgEAAAAAYK5M4oF0tyR5NLuv66qtV9VVSa5O8vAEjgEAAAAAYK5M4oF0tyR5NLuv66qtV9VVSa5O8vAEjgEAAAAAYK5M4oF0tyR5NLuv66qtV9VVSa5O8vAEjgEAAAAAYK5M4oF0tyR5NLuv66q

dK45veTCxSxuf+7HeHH7Qi6+YHFSJUKSzXFOlXfW4myyKltsNN//DMWkv/9ll2mZxn+ryiuTtlpOZY5ZmUV
z+LEkV4ytXz4aO527krwuSbr76e4+OPr5E0k+k+QlU6oTNr2dF+3I7Tded+IL5Pg9iXZetGPGlcHkyTvTIlsMjc
wyVLLLkMgrG03mmJUNfyBdkvuSXF1VV+ZYU/imJG8Y36Cqru7uT49WvyfJp0fjS0me6u4vV9VVSa5O8vC
GVQ6bzMJCZfe1l+aat70qTxxezsUXeJopW5e8My2yxdDILEMluwyJvLLRZI5Z2fDmcHc/W1W3JLk3ybYk7
+/u+6vqtiR7u3tPkluq6jVJjib5QpI3jXb/9iS3VdXRJCtJ3tLdT230McBmsrBQuWrp/Fy1dP6sS4Gpk3emRbY
YGpllqGSXIZFXNprMMQuzuHI43X1PkntOGnv32M9vP81+H0ryoelWBwAAAACw9W3aB9IBAAAAADA9
msMAAAAAAHNIcxgAAAAAYA5pDgMAAAAAzCHNYQAAAACAOaQ5DAAAAAAwh86bdQHAma2sdPYfPJ
LHDy3nkgsXs/OiHVlYqFmXBc8hpwyFrDIUssoQyClDIasMhawyC5rDsImtrHQ+fP/nc+vd+7J8dCWL2xdy+4
3XZfe1l/qCYNOQU4ZCVhkKWWUI5JShkFWGQlaZFbeVgE1s/8EjJ74YkmT56EpuvXtf9h88MuPK4E/IKUM
hqwyFrDIEcspQyCpDIavMiuYwbbGKPH1o+8cVw3PLRlTxxeHlGFcFXklOGQlYZClllCOSUoZBVhkJWmRXNY
djELrlwMYvbn/sxXdy+kIsvWJaRfCfV5JShkFWGQlYZAjllKGSVoZBVZkVzGDaxnRftO03XnfiCOC+C+L4PYd2XrRj
xpXBn5BThkJWGQpZZQjklKGQVYZCVpkVD6SDTWxhobL72kty3a3PZhbWKhctXVp/zCzytl9MHhkKWWUoZJUhk
FOGQlYZCllIVjSHYZNbWKhctXR+rlo6fl6aIwGnJKUMhqwyFrDIEcspQyCpDIavMgttKAAAAAADMIc1hAAA
AAIA5VN096xqmr/o7zTyWb70WxhMUzjmenPCc/25q92xreqhGuTKyoC0WgZHxkIzXYyWa0+sQiYg3Oq+9nS5Qze6IbJG3g8g+/NEP0MmUBR6X7Zmt1/eSOPyqvzL3e/5FbbK+6pSqhxZ1Gp5ru/rFMKmDCmvPFzJ2zM1k3fR7dwGXg2FsS0vcJ+60JsHEdK4MNf5CbNoo+yRuPEJcRqbfB5pSyD6BWpeGOcS3v2dM2h9Vk9jWgCcEbmZvJfgJEeuw3dB+VCTY4twd9U/nSyqNjqhsQ+fvRmrKfRZMIPyUI5Be5hZsR4ZZDsD3YmTa8GJw9h/a/5Jt/sOuSlZzmAbRzZPdpuYUuPSzZDlG2jjLhZf9dVPSG+TYDCd1j2EkYUbPNU4BqBqO4IlYzp0bTgwTRhAD5Gq33A5N7yyqmyyWRwaeG+M5Kd4WTKgjI9sqUKnCN3sF2kLRO/xqHv6/m8DzpFUYK29J9LPYmDTZC0WPO2thK5r1eA+eknGjBLMgbtcqiI+IeN/rkt4bxhMKfy56Wmth8SmRO8Mq+ghqsaF6W1LLl4LqgoijuL2KhNiDQzSC9i8qE/+pcOwzvCNlBx2ypx5aVmTbqtX4T6Bp1ZOLP9y6wRpovSnFxt2uqL7GEyRP/qZeH3jq1U/bYIWlyu5jmY2QZQZe5yn0tJv33JnRzFxZPyA4I8YHjWGljq2M6I6/oHpF6cPhIXuUebwZNyd7sUXmtRDZV2R8G9yTk4tEnfxGQtA/c0yHQ0qgl6JSwHbZCGmNeYdb3E7spZZ0aTR3TdhnW/lvkyi3FVbG6nexgbqKpWNp6B1UStjjkPAkITiJZPQVWQQxKJjpURb/JUN8tIHaRSVCs5uvoMxpdcPgHCoAYaaZU1mEFtSPU3H54X6R4sAbSmc4ZZnWV5e3OXqbwvo8dI1Kn8jQnqTsqDc+eFfGzOIMd3dUovZaO0dNROD+1gw6nQCeWMKgCD6j60ubWH5SeGiDdgvDbmDmLNAA8GUcIEwWDYPf7k6iIXQbkCAlUU10j9kRBa8TDZkqYN2AcVxH39MLWdPbONZEaj5VaJkgbA0pkMIlI7KgUgj4KSHv6g5q33n6rd4K4nyeRsn1fb8s3lOvDqe4ugqbw0ti2dsiU6Mb5ZtANX7z3yFFQgzKKgCk1RE3TwdZZpn+gaa2efuUe9e2nGSXV2BWXupCqV3Nu6EFX1rj3bgXJfFP2E8nEaX29L/aFEnxnPnPv9CRd1nzJpB2qktaNt7KUhs3fKuZjJdpBddmH4B4P8kb7pljg3qF4v9mxSndHZ/O1nAozRLJ4yvqc5ZBO6BlTVZ0gvJAwo99l/1vDrsnwzhT2oiBr66Ys3Q8uDbXBFVEHUWnN0I1p+UwA1HZ3AJkbBrdoBNLnA5FA3DjdDPpsGb5RC7oXGA/lxDlsXwoUPS9LJwc2BDc7Cxn9ixRkmomhe4fe9MPt7zlp0KyVbj0wYfrFqtmphvKVC3JFBhYLjEMg8pDn9yuYHQXtVr5QUzB4ndTdf2q8e+8fYe8S9k9/yN/oBAvKzAo2n/kv3Aq6CpZWtJOeeOTQdJc9IsxH+gc29TN3uTqqgVWwdUpTgbSVV7THHJgeP8c/7k08aDTcG8rFcEVn87ZGPu6ilJXW3aK1MKhgvsOQfEM8G5Q==

sXcvuN12X3tZd+RejWsy3AtDgXnR3vG5OystL5Nw8+nk8//kf5+Y9+Wp7YclY7Xzqfsl6TyozssRFOlbO/94Z
vzjPPtuyRxLloI0ziPZ7mA+nYYvYfPHIibEmyfHQlt969L/sPHjmnbQGmxbno7HjfmJT9B4/kU49+8URjOJEnt
pbVzpfOp6zXpDIje2yEU3eJus8AACAASURBVOXsU49+UfY4wblo+ibxHmsOs2aPH1o+Ebbjlo+u5InDy+e0
LcC0OBedHe8bk/L4oeWsdOSJLWu186XzKes1qczIHhvhVDnzvc8456Lpm8R7rDnMml1y4WIWtz83Movb
F3LxBYvntC3AtDgXnR3vG5NyyYWL2VaRJ7as1c6Xzqes16QyI3tshFPlzPc+45yLpm8S77HmMGu286Iduf3
G606E7vh9TI7fcP5stwWYFueis+N9Y1J2XrQjL7/8T+Xtf/FqeWJLWu186XzKek0qM7LHRjhVzl5++Z+SPU5
wLpq+SbzH1d3Tqm/T2LVrV+/du3fWZWwJx5+A+MTh5Vx8wZmfgLiebbegdR/oajm97IoX5Q8ffeScipqUr
7/8ijz2yB/MuowTNtN7k2y+92cVE8/qZjPn56Kztsnet7P6xUPL6la1stL5g6eO5PFDT+dLzzybF71gR6584Zb
9HG75cypfabXz5SY7nybOqZvepDKzCbO3XrI6AKfKWZKhZ2+9fP+fwRY4F216a3yPT/umn7faL6iqbUne29
0/cY61sgUsLFSuWjo/Vy2dP9FtWd0fPvpIfuAXfmvWZSRJPvjmb5t1Cc+xmd6bZPO9P/POuejseN+YlIWFys
4Xnp+dL5QltqbVzpfOp6zXpDIje2yE0+VM9jjOuWj6zvU9XvW2Et395SR/4axmBwAAAABgU1r1yuGRT1b
VniS/kuTI8cHu/mdTqQoAAAAAgKlaa3N4McnBJK8eG+skmsMAAAAAO0puZwd//1aRcCAAAAAMDG
WfWew0lSVS+pqo9W1e+N1r413dlAIAAAAAAJiWNTWHk/xikncneTZJuvvB/VKxi
ylef0tV/W5V7auqf19VLx2N76yqPx6N76uq943t862jfR6qqv+jqmqNxwAAAAAwMham8Nf3d2/c9LYs2f
aoaq2JbkjyV9K8tIkP3P3i8+TvmA9398u6+LsnPPd1o+UtY+N/P8mPJbl697tdyf55SSvW+MxAZ
wk1X14hx7CF2q6vuTfG6vuTfG6VfV6R5KHufri7n0SS5Ibxsfo7kNjQzuzOz386sqk8mOZTkXd397
0ZzPnrSnJet8RgAAAAAABhZ65XD3D3d2vbKU5SbKU5Jru/gvr2He1ie/o7hcn+ckkx+ckkx9y97kkL+rub86xxvEHqurC9cx
bVTdX1d6q2nvpFLyrnvgwgIFJlAoTJ6cMhawyFLLKEMgpQyCnDIWsMgRyylYrDIWsMgRyylYyylDIKkM
hqwyBnLJZnfG2ElV1TZk/ypqvqrYyd9mdRkvbnbvS3mnbSbv/ypqrYy9dmGRxlbnvS3J1VV2Zw3cm5K84aT5r+7uT49WWvyfJHqurC9cx
vV9VVOfbguYe7+6mqOlRVfzbJbyf5kST/5xqOEwAAAACAMavdc/jC/i/SfK9Sb4myfeNjG7n6q2Q
W5Lcm2Rbkvd39/1VdUuSvd19V5VuSvd29J8ktVfWaJEeTfCHJm0a7/7f3uAb12aSf5hkq9K8hujBQA
AAACAdThjc7i7/i7/0WSf1FVf667/+N6J+/uu5PcPGrcvsta9dtMHeBwCCzpSn4KTLxkJ+7yCg8tuz+Y9f4v2kRzr7hCt3FmF/TqJg4wz
GDVfXRqvq9cj+qJhmjn+mqSgfwKWPn/4Qk2lgzqxpv+W3L1lPedJ3J0nuwiV31M3bRYkXcv+K9+wc7mv8+V5y9P0jTahGlKmlHeKd8r0sjuhVHi8S5Pr1Q
UqgIAAAAAYK3rW1Bzu7oeTvKaqdiRZ6O07D0y0LAAAAAIBpWlNzuKq+JsmJPJmZNmZ5LyqSpJ099umVhkAAA
AAAFOz1ttK3JPk4tK3JPk40l+N8nK9N0MoBAAAAAGAjrLU5SvVtaeWHXuSgnwEgGAjrLuiU1ubkwkhqaTrLhHJF+a
ZiEAAAAAAGyctV45fCTvJqvq6rdvqBOJyxkqaQfPHxCHn1pj7xsatOOc5yAvSL1vTpuWSiLBj1sAb+SVvdH+/VhEWZeRAXOfjL7kQ
R5Xo7d0uJvdve/Ge3zsSRfl+SPR9O7DD5PcnCe2uQA1FlAk+c7qt2ZjhTbCyAyFGSmq1nOSvmOtE+dAiXN8mcPPwoxvSZsA0HmpSvDmkfSvvWp/ZnsxWgJd1YxZvYSoDdZ9YPKOtHeDdbknLSS6PSvmzUEVWbcXL+HSE8LQlHGypj7+j/eK7YJHPaX74Ge3MX1Gm9u5Xn4IFYp7YSBUkvOWKj7v7cAo/8uH1nnyQ/wWdSVRpWqF5tqqh/s9s3tWbpP9g5rvuWv/xDgCuSYvxVy/P/hNBBfjn5nOpPn7v82Lnj9vRcpsU1+n5Lh8iNuK/RhxIRVPkRcAG4bJeAiWjjxRXBNw4yR+C8JtrK9dhvl79IhJ8KJtNJnvJpjKCGWAJ8e5X+N2hOHm6+XIXOf5G/Uk/k8nuRwrP7q8ocH3PSPqyuppNeJA+QcCFwbN2r2oskUWAFGvpTM7Phj7dKp7LShO0mRXx+UpfnRT6PtDf1SmJ3KpmzLwKRkFMjCsYtPfqdJsFfz7LPB7A8+OMxS7L3EhBOvS+ncMjjAn3Cx3rRVUtdxDXcRnYM/F6lPoQd6ChJvuYyQkJbfPlK0Q1DEHPrQkVfeGbTh9ekXlrf4x+vHj9wPaqYb0y+dfZ4JxKFqYq5ETn6cRD6CIHX5GdBsrDCImIzr8EuR2tvcjKsoNm9mAyoH1FwjMM7SWD5wqr3LuEr6rEASw+R4vNGHsMxDh+Gz/zkEX7kFHtGK4WUfNGFCc2NhJ07Tw1x1G5BATTFrnF1zCFbbl0UwrtQl2xf4hWHi2/8CRI7n0FtROWGlZQ2cqvxi0o6FfP6fbCLAeP2nwsJ2pRhzvgkq3qGf+6fgHQu5qTwSuOXkw1SMnsDqnMHcGwNZaC8c5cGeQRRhvwQ/6f6ypEyrDD47jHf+wL/gi8vAtPeS7mEXQoqwvUtlxsmB6NqbdxH2FBlGeROrNqyUC8D3PDO6QGZMMLyUPq6+CBc3BUN4Nws8L8gbwo8nbpR+hJ8K11JVt84vsrZHf7QLZnQJ7VE5u94PGhO5cJrRzxq84E4Anrcu7dyqx2Wd4tmG/mLkf9gZsF0sAq2Jw5cRw9lmgLe1OWjCP59Jhfwd9qZYOeXqRCJwuLq1ucvJjzxIeaHkyEBIMQ0BJ+75ffeFw9Bwwdk/dV0s6X8ZkRWDfgi7w30f5RUoN4xR2ZMvR9GhWDhWgLmHWXaG+DJNa2r6bbbHXJsPmQ7wiKrQdsyTHhGqEHNrhp7NmpLcW5Ch39AYRGm4zFBSVkh6pRFhcbx5cY1nWhoSEpESf/5m2QpgEZ+0+iLWPyDoUn0MfJJghjRIbDJYfkFbdMkYX5dDuiSl8Lj5cjrhGuX6dpTh1W/KNrWJr2gBkEXHIOe4bwXX0jSbrnxrH/jDv9YqOHVjAvMYI4CqB+pBYa7yGHjC1iNhzkXz0W7KlLhoQx6OzWO2hqRaJs7tyfM8Xat7kznRC+T/jJRp/2xJFaN4TQ8X+7sxVcA2MxPnvO8+NlrO/uOQH9Cb6+ObnWzp8PydHnOqdqPAGWVxqP7SMnGixkLjXf9tnU2k5dQSbaC8UxkcDGaYdQgfYg+uHfk9H1o1CB6yN1OWU+6MEHaIBr5ckB/ccdDL0h5Ow8oSQvytVmEhC6dKJa+5Ee1L1b7r9dfNR0ghubdePAM6J/ncmHrkfk0LzkbqdhfBMnwLhxG1r9hFnjkXTYM6h4z9ceNjDuLQ/XeZ1KJhzAhP7M1w0CjbDvGGMkq8V+u/EJH6eIaglpCiG27kvpnc3RqOwa5D0GV35xxQmNqNF9Y1aJXmqBAfk1J9Y5fxxP2mVbbMg4nOsVUKhLhmjwJhm0Hr0gWXv9ELT3uVG0qAAAADZ3HtP0t+X3NPe6Po/2lx+gv4d4m4V3KoT89uPzZ1Z2uUtWQ5ZtUlKgQ+W5TtmPPHzPQrYh9hFk5c4tf1bHTHVqz7LZzwSmN/8lKR1nb2Rf1+vHBBtLPMh4Iw6qnP0XnVQP0+nePNoWdr9mRAMlUxAAAAAAAAAABxkNqqP5l1prfe3Ht1e5mZfS2dyd6RVadAq0KKUKKTIwCMrjmE4RrcNgZbf8ssXtqkQrZcvJ7TR7cVk4ux/WOK1EVNFU1sfoSvrZfTkm/aZ5WKn9rPuTe7PWLfaKsbZqEVz7gpY3KvjIk8dzRnrP7kN/Nfo6DRPsl1L9OB5yEXaETSSvk+f87P9+sVx9N5N7k4j8A5C8K5n9Z8/WYcY3/dVvDKNx1Wi+RTfTYgiOTrzQf2eJ8Sxf/9Z5+9RfE3Jq4UNkfz8NlM6Gn4z9EqXqv0FDhgp4vfUUt95IqbiJqNVgqPXJ1z91ytLRQ/eI9VJg8L1dn1eZTTtq2nGxwhpRDRqKlXKFPUzRq3JlnX0h7aD8K2FHEjlE5l8YxeoTRGbHBSGnTz2K6/iHJMRnZwD2eS3BXqL2bpqhjLyBX2OFgXyQDhE4SUFHFXBi/rQnUf3Er3kx3tLm9DzbPsuGzSTDNVX2sTDHJzBqJ7Byu8nJ7ypwqR1k2vtKf56Lv9jkFdK/2TOfrL1Aztv9hRTHJlzi+hNq4o2mkXBZ/+NvJnDVsH0J4GF/ApbbsVKnxB4s6JFdBxPhL4v0Gp3ebXp7Me1xrA6sJ2vU0GcvlfYiRPGFJjpVvyOb+ifdnnOLdVvXTTCnR6F7kXZxr0Ig5ZBTvfmHcZ0RhZpHM7ejxgPK/zqm8kIDDVdaOxAjHoC8Aw2yB2bfGZfO5NTFIQqEhnlPpE/p6bmGlVrpO0JqdLX5ALBs/7i/xk7iOZ0xpvZEAAWkVVmUYgXEaAJNdSNnjqRwdFjN3IP1ClD4Lwhb4r3hL4q3eKtnXOzx2zf4uSnBE+2XrDGP4cj4eUbP1v1QgxgUDMImKXhVGKPEzPDSA3MqK2dvdKCBGF3p8sywxHCeYAUYY+qm6uXRuXvIuXHG4jzALdXavV9ocObWNC5xhCbfHG0RwnICHbdkxLq+nGCGO4mDAH8Y3LQc9/FjG1jhELZ9JNZ5oKK1fqw9nDzTtLWZaqvHd1q0RN9GvcDaZdGaLJOxQ4tvlmHlhSmN6JMYOW55qtW2O7a+eyVNA2qrhPvmuv+bGYhbBQXEbb+A0jsvNMWWm1JSPKbWW5yL1KdBo+sW4YGsl3jGzfr33iWGP2p5I8YdOIbsKOFxRrkRGkmDi7mL9J9+FNPRFQaUHk8H/eAzxuu+q5y3mb0J9gkmEgt2g6CfRXbkYADPRR/qeMAYtHUfb9d2Mja4TSHQhFyzW9DbGe8h/uKQ=

LbZJ5Ps6u4vVdX/kORnk/xAd/9mkutG87wgyUNJ/t+x/f5md//qtGoHAAAAANjqpnnl8CuSPNTdD3f3M0n
uSnLD+Abd/Zvd/aXR6seTXH6Keb4/yW+MbQcAAAAAwDmaZnP4siSPjK0/Oho7nR9N8hunGL8pyT89ae
w9o1tR/N2qev6pJquqm6tqb1XtPXDgwHrqhg0jpwyFrDIUssoQyClDIasMhawyBHLKZrUpHkhXVT+UZFeS
v3PS+NcleXmSe8eG35nkmiR/JskLkvzkqebs7ju7e1d371paWppK3XCu5JShkFWGQlYZAjllKGSVoZBVhkB
O2aym2Rx+LMkVY+uXj8xj6pek6pek+Rv6Jbm+u58+6eUbk/zz7C7P9fHPJ3kl3Ls9hUAAAAAAKzDNJvD9y
W5uqqurKn5djtIfaMb1VV35zkF3KsMfzEKeb4wZx0S4nR1cSpqkryuiS/N4XaQAQAAAAC2tPOmNXF3P1tV
t+TYLSG2JXl/d/d/d99vdde3LsNhLnJ/mVY73e/EF3X58kVbUzx648/rcnTf1PqmopSSXZl+Qt0zoGAAAAAI
CtamrN4STp7nuS3HPS2Tp7nuS3HPS2LvHfn7NGfbdn1M8wK67Xz3BEgEAAAAA5tJUm8Nb0cpKZ//BI3n8n80HIuuXAxOy/
akYWFmnVZAHPBOZhpkS2GRmYZKtllSOSVjSZzzILm8DqsrHQ+fP/nc+vd+7J8dCWL2xdy+43XZfe1l/qwAk
yZczDTIlsMjcwyVLLLkMgrG03mmJVpPpBuy9l/8MiJD2mSLB9dya1378v+g0dmXBnA1ucczLTIFkMjswyV7
DIk8spGkzlmRXN4HR4/tHziQ3rc8tGVPHF4eUYVAcwP52CmRbYYGpllqGSXIZFXNprMMSuaw+twyYWL
Wdz+3LdscftCLr5gcUYVAcwP52CmRbYYGpllqGSXIZFXNprMMSuaw+uw86Iduf3G6058WI/f/2XnRTtmX
BnA1ucczLTIFkMjswyV7DIk8spGkzlmxQPp1mFhobL72ktzzdtelSCOL+fiCzw5EmCjOAczLbLF0MgsQyW7D
Im8stFkjlnRHF6nhYXKVvUn56ql82ddCsDccQ5mWmWmSLoZFZhkp2GRJ5ZaPJHLPgthIAAAAAAHNobq8cXln
p7D94JI8fWs4lF7pUH+BcOKdCsDccQ5mWmWmSLoZFZhkp2GRJ5ZaPJHLPgthIAAAAAAHNobq8cXln
p7D94JI8fWs4lF7pUH+BcOKcyFLLKUMgqQyCnDIWsMhSyyizMZXN4ZaXz4fs/n1vv3pfloysnbvK9+9pLfeg
A1sk5laGQVYZZCVhkCOWUoZJWhkFVmZS5vK7H/j4N4ETH7YkWT66klvv3pf9B4/MuDKAxeEczLTIFkMjswyV
AThkKWWUoZJVZmcvm8Okn8O0OHlk982PzgigOFyTmUoZJVhkFWGQE4ZClllKGSVWZlrqdlfV
g1X1UFW94xSv31pVD1TVp6rqo1X1DWOvfbmq4/m/GBVPW+9dV1y4WIWtz/30Be3
L+TiCxbXOxXA3HNOZShklaGQVYZAThkKWWUoZJVZmVpzuKq2JbkjyV9K8tIkP1hVLz1ps08m2dXd35TkV
5P87Nhrf9zd142W68fG35vk73b3Nyb5QpIfXW9tOy/akYWFmDJDAAhkCOWUoZJWhkFWGQlaZlWk+kO4VSR7q7q7oeTpKruSnJDkgeOb9Ddvzm2/ceT/NCZJqyqSvLqJG8YDf2jH87yd9fT2
ELC5Xd116aa972qjxxeDkXX+AJkABnyzmVoZBVhkJWGQI5ZShklaGQVWZlms3hy5I8Mrb+aJJXnmH7fX7H03
yG2Pri1W1N8mzSX6mu38tyUVJ/mt3Pzs252nmdqyqbk5yc5K86EUvOa2xOdn/sR4WKUV9L+orXFxFxYqVy2dn6uWzl/b0cAUrJZT
2CycUxkKWWUI1vL9L6tsBs6pDIWsMgS+/9msNsUD6arqh5LsSvL3J3doxnUS7HNsJWXBtE6G8jZPj4/XtvKd7AX0x+sEKtBlB8bIxb+sN4f3T6W
IlY8f0/8RZoUKgg/bOlRFa9xwvY9wUWZs2Zw48eMWFtOOhHd/e+Xnqsi1kF9+A1Xf6hWPhfEmvSs9S1TXnfg6dRJdS
l/yE9wbdpT+kZaY8yYwQQBZXn2UvE3cBD6nsxf9n9tdPwNyBsd03d1zm5HDfbNpFL+B7wv68ZWkr7mCJgQK3d2u1/fHg5SvjkVbhf/Bdi2/dhXXJ9Ih0V2f6
iMN/kdx5+L6d7D1v3Yyr0cHr3jYRSf1+fruFxSqE+FNNiiqujjb1WcZ2+bh2awdAQXbgo1W2FpbYGmvV5hF3Tb3WeWd3WpLfl
/rf9+YTuIKfUkdFs3aW1ZEczqbxrGdufxO82j6e6JqnR7Nwnu/fX8bvMtBBx1ItG0tcl4/H5rcKH1ZUbUhaVAfhXY8lNNK0s
p7j8eDFxs1Kf2knWwFFsWmSPYWbLkjyN/Wk0zL5G5PwD9ly+19vVfy5SZ7mdLbpqmCnTSzeufxVR7tr+vQ+6a5qfbmFU1RHmBXwLPOufVvsAjLwk+a4gUkSpMmfqfsdY3
HcHpWxm1uq+6b7rt5Bx6pqr+gm4vxmxMtbT0ZDbaHvTyA+mOwrjmzmnLv
AJ2ZqKdaQAAAAAAJJjMEm+tnPrqcm4RiDhfDH+S7PDNu1tVwhbqcPXmSvUhdUVbQV5jqZ+3Cab3BACMEJiHWHdQbM+OZPyLw8
mdA+gIAAAAAHB0INBpfeRYVXpz1H2aVvdOZnW9Ogd+rM+9wiQW5dafBX9Ifpz/Q2qJnuP0ToLtJVqVkmpLEpGcJO3nxbm/vv9H

KoLJkXeA8TCeciGTb2aVbNIV2WM5eegHzWHWbPvWLbnnlp1nftin54rZvnVLx5XB+Mk7wHgYT7mQyTe
zSjbpiuyxnDz0gwfSsWZzc5XdO67IS++4MU8+s5DLLvGUSS5c8g4wHsZTLmTyzaySTboieywnD/2gOcxI5u
Yq1227ONdtu7jrUmDi5B1gPIynXMjkm1klm3RF9lhOHmafaSUAAAAAAAZIcxgAAAAAYIA0hwEAAAAABk
hzGAAAAABggDSHAQAAAAAGqJPmcFXtrqpHqupQVb15lfdfWVXvr6qTVfWaZet3VtX7qupgVf1lVb12up
UDAAAAAFwYpt4crqqLktyb5NuTvCzJ66rqZSs2+2iSyNyT5zRXrP5Pkf2qt7UiyO8lbq+oJ1sxAAAAAMCFZ1
MHx7whyaHW2qNJUlUPJLk5ycOnN2itcHV56b3H5jq21v1r2999W1ZNJtiX51OTLBgAAAAC4cHQxrcSVSR5
b9vrI0rqRVNUNSZ6X5G/O8f8G/O8f5tVbW/qvYfPXp0XYXCpMkpfSGr9IWs0gdySl/IKn0hq/SBnDKrevlAuqr64iS/
keT7W2uLq23TWruvbartbZr27Zt0y0Q1khO6QtZpS9klT6QU/pCVukLWaUP5JRZ1UVz+PEkVy97fdXSuj
WpqkuT/Mck/2tr7U/HXBsAAAAAwCB00Rzel+T6qk+T6qrq2qp6p6X5NYke9ay49L2v53k11tr75pgjQAAAAAAF7Sp
N4dbayeT3J7koSQfTvJvGa1gVd1dVTclWa+1gVd1dVTclSVW9vKqOJPmuJG+vqoOJPmuJG+vqoNLu9+S5JVJ3lBVB5aWndM+BwAAAAA
vtvUxUFba3uT7F2x7q5lf+/LqekmVu7375P8+4kXCAAAAABwgevlA+kAAAAAANgYzWEAAAAAgAHSHAY
AAAAAGCDNYQAAAACAAdIcBgAAAAAYIM1hAAAAAIAB0hwGYGyuvPqaVNXMLFdefU3XMLFdefU3XX8nM8m8FAA
DApq4LAODC8bdHHstr3/7erss4451vfEXJcws/1YAAAC4cxgAAAAAYIA0hwEAAAAABkhzGAAAAABggDS
HAQAAAAAGSHMYAAAAAGCANIcBAAAAAAZow83hqvrdtawDAAAAAAAGB2bFrvjlU1n+SFSV5cS5VS9KUktvX
ZrkyjHUBgAAAAAhKy7OZzkjUl+PMmfzfL45/HSSf7AAAAAAmKB1TyvvbugAAAAAAGDhvbBwtXvuUl1tq1SmwW
bt0vLVrbXnbA5X1e6eqqSqSdVxm1d5/5VV9f6qVV5f6qUUWruutXE
bt0vLVrbXnbA5X1e6eqeqSqDlXVm1d5/5VV9f6qOllVr1nx3nuq6nuq6lNV9f+tt3YAAAAAgKHbyJ3Dhbj3DSZLW2tuq6
hVJti//vNbar6+2fVVdlOTeRivRuWuUjfiGnprN440ZrBwAAAAAYqg03hqvN
5K8JMmBJJJ9bWt2SrNocTnJDkkOttUxUeX9n8gyc1JzjSHW2uHl95bXLza+13uR+SS3BW2AAG2Ar1Dlntwc
yctaa22N21+Z5LFlr48k+B+k+box1AEAAAAAAwBqte87hZTk1P6kHlWW0CNf
Z1+bTW6wtqe63I+ZhQmkjxPZFY2WYzW8fyeYVOa7hk6HnGsPstzJjKDDEqS
9IGc0heySl/IKn0gp8yqdTeHq+rdVbUnUUPoBUnUBnyrUhUmiSUFxUiAhZyqSc
u4Px7GQk7pC1mlL2SVPpBT+kJW6QtZpQ/klFm1kWklfnGd+a+amIRX+A3UAAAAAADCidTe
HW2t/uM79TlbV7UkeSnJjRkvtbawber6u4k+1tre6rq5Ul+O8mLknxHVf2L1tqOJKmqP0QnKwqP0ry0iQXV9WRJD/YW
ntovecBAAAAADBEG34gXVU9+g+n/kp9srT26cp/W3W3W3E/ptaqcr/W3oxPkQAAIABJREFU2t4ke1esu2vbL2n6b
Z2mt3bjRmgEAAAAAhm7DzdiQmicmibiJUnqPlqmcipbiJUnen+T+JK8awmU6
5M8meSJpb+/p6pekOT2T6mX=AAAAAABBjtuE5h5ceOPcd53j7jzf6+QAAAAAjN+6m8NV9c9ba2+qdlle
kjWmt3bKgyAAAAAAmZiN3Dn946X/3j6MQAAAAAACmZ93N4dbaH4Ndau5f5f+9x1JU1JUlUvbK19ZlyFAQAAAAAw
ORt+IF1VfUNUPZZkvy69/uqoqiv69uqq+uUNVwYAAAAAwMRsuDmc5H9N8u8m+USStNb+Q5JXb+AjQAAAAASgHbJAEu71PJ+d
a09tmLV58bxuQAAAAATMZGHkh32mNVYokrao2J/mxfP5hdQAAAAAAzMBx3Dn8w0lnpfmIJMmvvSR5Psn
PpNQAAAAAAAAAA2rDdw631a9mp+zjqyt1k/gjb5x+r5b4jb9u/EbfTWsHUwjbXtPSdqvamknWh1ZmYWlAXBs+CQsUM
0jysxusBQAAAACAKVl3c7hVf8c8z1/V5jy9/DQAAAADAbBvHA+AAAAAAAAAf7h4h7o0idnf1wxlDm3GBzcnz3yCWmbUs9Y
eq6s2rvP/Kqnp/VZ2sqteseO7/7quqvl5bvm17VAAAAAAAXjo08kO6ZfP6O4RdW1dOn30rSWmuXnmOmO
Lcm+TVSY4k2vd2e1prDy/b7KNJ/3xp30u9u9zwAAAAAIZoI3MOX7O7Kx7Zj3t7xr0/b4T6vS/aBz8mk6X9x3B00ZeAl0+uN
9miSVNUDSW4OcqoY53Fo7vPTe4op9vy3J77TWP/u8+kZkpWa9z
tVt1XV/qaf/To0XUVCpMmp/SFrNIXskofyCI9Iav0hazR0a0dnyZFpaK3d11rb1VbtbqZ7LgVxJKX0h
q/SFrNIHckpfyCp9lav0gZwyq7p5xYxAhzvQWwq4poDj+e5Oplr69aWjfpfQEAAAAAWNjFc3hfkk65rXtRQ
51qp6UVW9KmWn60Lq00DAAAAGAEU28Ot9v9T8q5o/rQOPRVz4qzwxR6YysXdu4s9ZJVvVvbyqjiT5riRvr6qDSZ9qOhNV+td+8nj5t+m80
sm/zKkG874kd59+OB0AAAAAGu3qYuYd2tbVHt22jJA2ltdsAnE7b2t7n1Jtm7Yt1dy/3el1NRqy27/1J7p9ogQAAAAF7gL9oF0AA
AAACcm+YwAAAAAMAAaQ4DAAAAAAyQ4DAAAAAAyq5jAAAAAwAAB18kA6AJiKuU2pqq6rOONLrro6jz/20a7LAAA
AgCSaw0zQ4mLL4WPH88TTC7n80vls37olc3Oz06SB85HhC8Diybz27e/tuooz3vnGV3RdAkydsZSh8xtgV
DJDn8grdG+jv0PNYSZicbHlPQc/njsfPCFE4uZ3zyXe27Zmd07rnChoBdkGGDjjKUMnd8Ao5IZ+kReoXvj+B
2ac5iJOHzs+JlgJsnCicXc+eCBHD52vOPKYG1kGGDjjKUMnd8Ao5IZ+kReoXvj+B1qDjMRTzy9cCaYpy2cW
MyTzyx0VBGMRoYBNs5YytD5DTAqmaFP5BW6N47foeYwE3H5pfOZ33x2vOY3z+WyS+Y7qghGI8MAG2
csZej8BhiVzNAn8grdG8fvUHOYidi+dUvm9YtHVcGayPDBtnLGXo/AYYlczQJ/IK3RvH79IK3RvH7
9AD6ZiIubnK7h1X5KV33Jgnn1nIZZd4ain9IsMAG2csZej8BhiVzNAn8grdG8fvUHOYiZmbq1y37eJct+3irku
BdZFhgI0zljJ0fgOMSmboE3mF7m30d2haCQAAACAAdIcBgAAAAAYIM1hAAAAAIAB0hwGAAAAABggz
WEAAAAAgAHqpDlcVbur6pGqOlVVb17lfdfWVXr6zq+tP+tkpAVb1qyqVnVbz6qlVncbHl0aN/edbVzJvzU
VN59OjfZXGxTbsEOItMamycsZS+kVn6SnmOLmya9gGr4jdoSfZV2mSOLmya9gGr4jdjdoSfZV1ZV7Z7W2sPLNvVn
1ZVd2a5OeTvDbJP0uS1tpXXVtVXVSf5TVb28bYdjoXF1fVec/DujzaxjzKcHYkPfIFJ
MDGGUvpG5mlr2SXPpFXpk3m6EoXdw7fkORQRa3R+R1tpnkzyzQ5OYV29yc5WbWW78yrTdXVSV5VWZLW2S
2pNJPpVk11SqTnL42PEzP9PExzP9IkWTixmDsfPJDDx45PqQ4i0wCbJyxlLF6WdFsdukTeWXaZI6tdVNEcvjLJY
H1lat+o2rbWTST6SqdEqF6uWHaSqbuquq/VW1/+jRo+u9fkpa2HGbN/9E9bObOLGSxqVzqvMoVtOZzkP1I1C0
GMvnMzwbzalMMi2TGFNhEtaVtVMp0+b6T1+M+/ovu0yK//6nD86XU5mj317VM3p/krUnem
+Rzq23YWruvbartbZr27ZtYzn45ZfO9Z+z2z2V0z/Z/0z5XHbJ/Fg+n+nE5E1Ikmm2xJgKk7CerBpMQ9Bpb3pf
d/2WVS/Pc/fXC+nMocXemiOfx4zr7b96qldatuU1Wbknx5OttZZ7Z9ore1srd2c5AuT/NUUak6SbN
ffcsvPMj/X0/C/bt26ZVglwFpkE2DhjKX0js/SVrxmdmkOtttZOttZOZ9ore1srd2c5AuT/NUUak6SbN
ck+b3WWquqFyap1trk/c2d0ZNBJg44ymzOqrqnp1kpMdrCnL9Zsc/2rVtMDE5nZBJg44ylzl9l3M0ley

S5/IK9Mmc3Rl6s3h1trJqro9yUNJLkpyf2vtYFXdnWR/a21Pkl9N8htVdSjJJ3KqgZwklyV5qKoWc6qx/L3Trn
9urnLdtotz3baLp31oWJVMAmycsZS+kVn6SnbpE3ll2mSOLnRx53Baa3uT7F2x7q5lfy8k+a5V9juc5MsnX
R8AAAAAwIWubw+kAwAAAABgDDSHAQAAAAAGSHMYAAAAAGCANIcBAAAAAAAZIcxgAAAAAYIA0hwE
AAAAABkhzGAAAAAABggDSHAQAAAAAGSHMYAAAAAGCANIcBAAAAAAAZIcxgAAAAAYIA0hwEAAAAABk
hzGAAAAABggDSHAQAAAAAGSHMYAAAAAGCANIcBAAAAAAAZIcxgAAAAAYIA6aQ5X1e6qeqSqDlXVm1
d5//lV9c6l9/+sqrYvrd9d9cVe+oqg9W1Yer6mfWW8PiYsujR/8u7/ubp/Lo0b/L4mJb/wnBBMkqwPgYU+kL
WaUP5JS+kFX6QlbpwqZpH7CqLkpyb5JXJzmSZF9V7W7mbPbxssx9M8snW2pdV1a1Jfj7Ja5N8V5Lnt9a+sq
pemOThqvqt1trhUWpYXGx5z8GP584HD2ThxGLmN8/lnlt2ZveOKzI3V+M4TRgLWQUYH2MqfSGr9IGc0
heySl/IKl3p4s7hG5Icaq092lr7bJIHIHkty8Ypubk7xj6e93JfnmqqokLcmWqtqU5AVJPpvk6VELOHzs+JkfW5ls
nFjMnQ8eyOFjx9d1QjApsgowPsZU+kJW6QM5pS5eOPNjO23hxGKefGZhvecE6/JcOU1kldlxvqzCrHD9pw9c
6e5GNJPprkF1trn1jtIFV1W1Xtr6r9r9R48ePeu9J55eOPNjO23hxGKefGZhvecE6/JcOU1kldlxvqzCrHD9pw9c
/+kLYyp9Iav0ges/s6pvD6S7IcnnknxJkmuT/GRVXbfahu1+1pru1pru7Zt23bWe5dfOp/5zWef+vzmuVx2
yfxkqoZzeK6cJrLK7DhfVmFWuP7TB67/9IUxlb6QVfrA9Z9Z1UVz+PEkx4guSH8SuSUHNrSWEy+kPbyTvVgTuBfWpa6f+fLkXGp1X4ZVxGGVJlUYu3
jnpAVJPpvk6VELOHzs+JkfW5Is+gbZg3Zpp+dFq21gyrWvLc+bxmb1Eq/H5Wqtw6NEEUGf3WU9B8+dXk6+
DhTBU0HQFZxNJ9qzM9dAFMo4fQ9KbMaCaS2d6oaGhJ0PbZgLi6X5x0cDmYBfsHkQX6gDrVI4W3g1zpq/3kW
Ilub6qrs2pJvCtOdX0XW5Pku9L8r4kr0nye621l5VlUfTfJNSX6jqrYk+fokbx21lm9yaR4XXbugJ9syyJ59ZyGWX
zGf71i0m+GbmyCrA+BhT6QtZpQ/klL6QVfpCVunK1JvDrbWTwbrWbbkWaaq6O8o6nN8n1+tqeJL+aUw
3gQ0k+kVMN5CS5N8mvVdXBJJXk11prf7meaOubmKtduzjXbbt4o6cEy9o6qNwtn8C+jEEyWrAONjTKUvZJU+kFP6QlbpC1
mlC13cOZzW2t4ke8tqsu2vT8EnQw87mLH8uU1trfqDomKkzdsuztByWrAONjTKUvZJU+kFP6QlbpC1
mlC13cOZzW2t4ke1esu2vZ3wtJvmuV/f5utfUAAAAAAIymbw+kAwAAAABgDDSHAQAAAAAAGqFprXdcw
cVV1NMlHxvyxL07y1Jg/PBUcZ25KlZwBxXtFDs4vaxr6hJUa8dsqVd0iybQS6fDyDQAu6533qK7DPUcyfSe
HGzG0c+7yfMc9pq5VX/6N+1JncmHXOs4xdRxm6btWy+q6qmWjWZWjWZ2l73AU6p6ucdTd1fX/fGbt30Q959
bpf/sPojk8CVW1v7W2q+s6TlPe7s5r5VK9aJ6uPNT8X53PhGeJ3MLRzHtr5Jv05577Umah1mma
pfrWsbpZqGYW6p0vds2fWzk0959Z1LaaVAAAAAYIM1hAAAAAIAB0hxev/u6n6OuSPg8hW5SShNO
/1qnWy+ljzc3E+F54hfgdDO+ehnW/Sn3PuS52SLWqdplupXy+pmmqZZRq2nUl/eqOR9U6PAAAAAOCCsKnrApMZ
ApAFy5zAAAAAAwABpDgMDMAAAAAADJpCzdr3vyo+1rJfgxX7mkmDu5iwGVaabABVMkNmaGAJ0IanthF30vHepvL0ZBuAwABDZ
ZXAAAAAAAAAAAAAAAAAAAAAAA...

qKrevMr7b6iqo1V1YGn5oUmcA8+2feuW3HPLzsxvPhWb07eqb9+65Vnbnh4AljMA0CeXX/r8/Ng3X39W
3n/sm6/P5Zc+v+PKGIWxaH1GGe/76sqrr0lVzcxy5dXXdP2VnOG7gbU733jpOsSoxpWZIVzL6d5qeX33Bx7
Pz3/nV8keSYxF0zCO68akboF7a5IjSX4zSSW5NclLkrw/yf1JXrXaTlV1UZJ7k7x6af99VbWntfbwik3f2Vq7fT
Klcy5zc5XdO67IS++4MU8+s5DLLjn3JNenB4CVc54YAOiLa75oS66//OLc9srrstiSuUquv/ziXPNFMtwnxqL1
GWW876u/PfJYXvv293ZdxhnvfOMrui7hDN8NrN35xkvXIUY1rswM4VpO91bL60/v/op861dcnq+88gtkD
2PRFIzjujGp5vBNrbWvXvb6vqo60Fr76ar6X55jvxuSHkpuTrGwO05G5ucp12y4+763pBgD6
bm6u8k1ffnmue/HFMtxjxqL1W+t4DzB0zzVeug4xqnFmxrWcSXuuvMoep8nDZI3jujGp5vBnquqWJO9ae
v2aJKdnm27Psd+VSR5b9vpIkq9bvfsfsggHg/OR0tsnw5/U
5q/4dh6XPWWU45HRY+nwdktVu9DkzXZHV7sjr2skpk7LR3+FE5hxO8t1JvjfJk0meWPr7e6rqBUk2Oh3Eu
5Nsb619VZLfSfKO1TZqrd3XWtvVWtu1bdu2DR4SJkNO6QtZpS9kT9QtFR5VdVhH3KzrEQ5fL4NS5eQRLMc
iOc7z9x8+x6+NJrl72+qqldcs/+9iyl7+S5C3rqEAAAAYMjG2hyuqn/eWntLvftq0wfwVr717+iZkRP2Nvkr0r1t217O+fSfIzG68WAAA
bU41hW9N8voVx/ji1trHll7eIOTDG68cAAAAAGBYxn3n8Olg7F717NxaO1lVvXtkC5SFSe5kvrR2sqruT7G+t
7UlyR1XdlORkkk8kecPGywYAAAAAGJaxNodba+vF+e9e93KAAAAAGQiGqAAbDknKuTICnzuzqGFirKHJAkeSSWiMM/AAaIe3aB10Xw9Yz
zeG01h5bsepzkzoWAAAAAACjGfcD6U57rKpekaRV1YWZrO+HsVQAAAAAAAEi1cCjJrUKKpAMd5h8ds2sL5QRVd9ipcaMTErOD4xsyFOP
68BAAAAAJgBk7pz+O9aa989oc8GAAAAAAGCDJtUc/IBBVPZHkj5aWP26tfXpCxwIAAAAAAAYIKElPppkX5J/1Vr74
QkdAwAAAAACAdZrIlBJJvjrJz78UVAJwcbjryrdNYa5aRV1eYkP5bpPsK/AbgTxJ+Bw4YbCjnvS8ZHUd1bv8eV+LeKd9Ck8HpmjqvfO
3E8AAAAAABGM6k5h/cneX6S9yb5oySvbK19ZBLHLHAgAAAABgdJOac/jbW2tHJ/TZAAAAAAABs0ETmHNYY
BgAAAACYbZN6IB0AAAAAADNMcxgAAAAAYIAm0hyuqhdW1f9eV9f9u6fX1VfVPJnEsAAAAAABGN6k7h3
8tyd8n+YaI148n+T8mdCwAAAAAAEY0qebwS1prb0ylyIklaa59JUlu8J1ouolQO
XUnMQAAAAAAM2DThD73Z5O8J8n+nVVfX/JPnGJG+Y0LEAAAAABjRRO4cbq39TpL/Macawr+VZFdr7Q/
Wsm9V3V7a6qR6+qUIW1axW1w1AwAAAAAMyVjvHK6q/27q/27Fqo8t/e8t3TJ9a+3P+3959n/oiT3
nl1kiNJ9lXVntbawyu2TTJyX5s/FUDgAAAAAwLOOeLh2Gf5m/8OMmDrPyUm1bfZtiTx/nfsrhrzwb/e81VXVNa+3895n/oiT3
K7f5nk55P81DrrBAAAAAYtLE2h1tr/8MGP9LrUHhZUCjd1Dp7uSrW2v/sarO2RyuqtuS3JKqbcSzRtu+kwu5Jf6Jlq
LgsmQU/pCVukLWaUP5JS+kFX6QlbpAzl2x+xzbttbua63taq3
t2rZt20YPDRMhp/SFrNIXchazSB3LKrJpIczjzJ/53ka5P88tLytUvrzufxJFcve33V0rrTLknyD5P8Q
VUdTvL1SfZ4KB0AAAAwGjGPefwaSa9AA9lIGY1J3Dn6uqI5+x+XnuqhXWDVDXV3Vd00oVoBAAA
kje11vaPpWoAAAAAgIGY1J3Dn6uql5+x+UVXXJfnc+XZqrZ1McnuSh50j
AAAZnUncO/1SS36+qR5NUki9N8v1r2bG1djDJwRtvjr/jrHtq/aWJkAAAAAMM0keZwa+13q+r6F2tH2tH
trfT+JYAAAAAACMblJ3DienHkK3fekYO6uq3BXfn+DxAAAAABYo4k0h6vGH8u4ZZEcxKUZi4u6uj0ZFZEcxcgAAA
AAYAZM6s7hXUle9yXUle1lprE/p8AAAAAAA2YG5Cn/uhJFdM6LMBAbAAAAANigsd45XFXjZvAPdHcwAAAAAA
11q7aZzHAwAAAABgfcY9rvcQvjvnzAAAAAACYgHE3h78myMZ3/Xo4ypUuzTdAbAE/y4weJ0sbZE8X
VX0wyZ/kVLP4va21T4z5WAAAAAAAAArNNYm8OttTcL8ttOtTc/cySVU9L8muJL2o8ozwdRdJPeR1J7quqT7XWtuj3tvr2HdHFrIZFEq8
vnP4tBckuTYFywwtf5vkgxMM6gkxbGBAAA3IPHprc7iq7kuyI8JHeCsjFufhGUkmb6h1tKMSfzHQ9Gg
Sf4suTJ8hQZHmBeA3M6BTAsyg4V3W0fRkeQJD6LAZuFOn0haaFcpmaeO
vAAAAY7ZkwKB4SC26j/GxyBE5C9DgAMm8HOWkq5Bx1wdGvHS9HsegvFx7X
qVs7duTUfMM/meQfVtUnkryvtfaz4zweAAAAAADrM/Y5h1trLcPqupTST69BIWgAAAAJgB
455z+I6cumP4FUlO5NScw+9Ncn88kA4AAAAAYGaM+87h7zuxE7x/l
5AAAAAABMxlzXBQAAAAAAMH2awwAAAAAA6Q5DAAAAAwQDPXHK6q3VX1SFUdqqo3r/L+D1D1fVB
6vqQFX9cVW9rIs6AQAAAAD6bKaaw1w1V1UZJ7k3x7kpcled0qzdiftLtqz2I36d61HTUnXNA72qh7rSr5yZNQAAAAPTeTD
WHk9yQ5FBr7dHW2meTPPLMTPJDk5uUbtNaeXvXXvZS2+AAAAC4Im7ouYIUrkzy27ePWRJF+3cqjwqOq+Pak
Z5XpJvmk5pAAAAAAXjlm7c3hNWvtzWVRWmv3j1Lz1+0Yl6Bq0H8ANHpFghrJKf0hazSF7JKH8gpf
SGr9IWs0gdyyyqatebw6bw41e5mMyMG/7TTXDa4/O8n+1tqDZVyuQ0EIBXtU0bbG9bbSKDXp2dZmQzbEjb3s
vpBV+kJW6QM6QM5pS9klb6QVfpANuWbVs1Ja+1p9tqDqSL0V7Z7gF5J+zebrY9c2F5mAS/x2++CD
M1JzDrbWTVXVbqnl7kVT7veLn+TRd7q+1AAAAAAAPqZtebwJ0i2V9WSXpn/oqfPeAD1
+KdXct+/vHpl4UAAAAAMAFZtamlAAAAAAAAGSBgcAAAAAAGSHMYAAAAAIAB0hwGAAAAABggzWEAAAAAgAHSHAYAAAAAGCDNYQ
AAAAGCANIcBAAAAAAAZIcxgAAAAAAIcxgAAAABkhzGAAAAABggDSHAQAAAAAAGSHMYAAAAAAGCA
NIcBAAAAAAAZIcxgAAAAAAIcxgAAAABkhzGAAAAABggDZ1XUDfLC62HD52PE88vZDLL53P9q1bMjd
XXZfFgMkkQyLvAKcYD+kr2aVP5JVpkzm6oDk8gsXFlvcc/HjufBPBFk4sZn7zXO65ZWd277jCRDIu8
ApxgP6SvZpU/klWmTObqgk8ifm9MlT+SVaZ
M5uqI5PIInnl448yM9beHEYp58ZqGjihg6mWRI5B3gFOMhfSW79Im8Mm0yR1c0h0dw+aXmd989lc2v3
kuI10y31FFDJ1MMiTyDnCK8ZC+kl36RF6ZNpmjK5rDI9l+i+dUvuuWXnmR/r6fflftm/d0nFlDJVMMiTyDnCK8
ZC+kl36RF6ZNpmjK4N9IN16ngA5N1fZveOKvPSOG/PkMwuWxSy8fbOzWnN7Vq9/p1Jf1iJJySq
Ou/7NIV//1PH8zNVb71Ky7PO2/7+nzs0wv54i94QXZ88aUyx8TNXHO4qnYn+aUkFyX5ldbav17x/x/x1p1JfijJySq
RHk/xAa+0joxxjI0+AnJurXLft4qDbxpasyiRdm+ZTegPEyrtIHckpfyCp9IHckpfyCp9IHckpfyCp9IHckpfyCp
67CpabqWklquqiJPcm+fYkL0vWyyqp62YrN/iLJrtbaVyV5V5Ky5K3jHocT4CkL2SVPpPBTgPErytHckpfyCp9Iat0Za
aaw0luSHKotfm2SR5IcvPyb2mt3d8+9R6N/MiE9PJNs0heySldmr

Tl8ZZLHlr0+srTuXH4wyX8a9SCeAElfyCp9IKcA42VcpQ/klL6QVfpCVunKrDWH16yqvifJriS/cI73b6uq/VW1
/+jRo2e95wmQzIrnymkiq8wOYyp9cb5xFWaB6z994fpPX8gqfeD6z6yq1lrXNZxRVd+Q5Odaa9+29Ppnkq
S19n+u2O5bkrwtyT9qrT15vs/dtWtX279//1nrTj+t1FNHmZCRw7RaThNZZeLGklU5ZcLWFaZzjatJUlV57d
vfu6Gixumdb3xFZuX/JpvF72bW6nmOfyvXf/pgbGOqnDJhskpfuP7TB+cM0qZpVrEG+5JcX1XXJnk8ya1JXr
98g6r6miRvT7J7LY3hc/HUUfpCVukDOQUYL+MqfSCn9IWs0heyShdmalqJ1trJJLcneSjJh5M82Fo7WFV3V
9VNS5v9QpKLk/yHqjpQVXs6KhcAAAAAoLdm7c7htNb2Jtm7Yt1dy/7+lqkXBQAAAABwgZmpO4cBAAAA
AJiOmXog3aRU1dEkHxnzx744yVNj/syNUM+5dVHLU6213aPssCKns/T9rUWf6lXr2Taa1ZX69P2uhfOZDS
PnNDlnVvv6HWzE0M65y/Md95i6Vn35N+5LncmFXes4x9RxmKXvWi2r66qWjWZ1lr7DUah7usZRd1fX//
OZtX8T9Zxbp//tP4jm8CRU1f7W2q6u6zhNPec2S7WsVd9q7lO9ap2sPtb8XJzPhWeI38HQznlo55v055z7
Umei1mmapfrVsrpZqmUU6p4udc+eWTs39Zxb17WYVgIAAAAAYIA0hwEAAAAABkhzeP3u67qAFdRzbr
NUy1r1reY+1avWyepjzc/F+Vx4hvgdDO2ch3a+SX/OuS91JmqdplmqXy2rm6VaRqHu6VL37Jm1c1PPuXV
aizmHAQAAAAAGyJ3DAAAAAAADpDkMAAAAADBAmsMAAAAAAAOkOQwAAAAAMECawwAAAAAAA6
Q5DAAAAAAwQlNoDu/evbslsVimuYxMTi0dLSOTVUsHy7rIqqWDZWRyaulgWRdZtXSwrIusWjpYRianlg6
WcxpEc/ipp57qugQ4LzmlL2SVvpBV+kBO6QtZpS9klT6QU2bJIJrDAAAAAACcTXMYAAAAAGCANnVdAPT
N4mLL4WPH88TTC7n80vls37olc3PVdVlwFjmlL2SVvpBVgPExptIXQ87qkM99aDSHYQSLiy3vOfjx3PnggS
ycWMz85rncc8vO7N5xhUGSmSGn9IWs0heyCjA+xlT6YshZHfK5D5FpJWAEh48dPzM4JsnCicXc+eCBHD5
2vOPK4PPklL6QVfpCVgHGx5hKXww5q0M+9yHSHIYRPPH0wpnB8bSFE4t58pmFjiqCZ5NT+kJW6QtZBRg
fYyp9MeSsDvnch0hzGEZw+aXzmd989s9mfvNcLrtkvqOK4NnklL6QVfpCVlmLK6++JlU1E8uVV1/T9dcB52
RMpS+GnNUhn/sQTXTO4araneSXklyU5Fdaa/96xft3JvmhJCeTHE3yA621jyy997kkH1za9KOttZuW1l+b5I
EkW5P8eZLvba19dpLnAadt37ol99yy81nz7mzfuqXr0uAMOaUvZJW+kFXW4m+PPJbXvv29XZeRJHnnG1
/RdQlwTsZU+mLIWR3yuQ/RxJrDVXVRknuTvDrJkST7qmpPa+3hZZv9RZJdrbXPVNX/nOQtSV77/7N37+G
e3XV96N+fnQujuQgMOwkmwUlqKk2KT9AhXkFF0KGnBkohXOoRKMfY0sjTE6XAoQWJ2noNVks1qSA3L
QQsxxQCkaMgtoBmwCk4UGSaTkkCJMNwSRy6YcL+nD/2b4bfjHPZM3v/9m+v/Xu9nmc981vfddmftfd7r
Tx8+D3fNdr2v7v78iOc+heTvKK731hVv5XkuUl+c1LXAePm5irbLjsvD3/+o3PPfQs55yxv7GT9kVOGQlYZCl
kFWD2eqQzFLGd1lq99Fk3ym8NXJNnV3bcnSVW9MckTkxxsDnf3u8f2/0CSHz3WCauqkjw2yTNHQ69N8j
PRHGYNzc1VLp4/MxfPnzntUuCo5JShkFWGQlYBVo9nKkMxy1md5WufNZOcc/j8JHeMrd85Gjua5yZ5x9j
6pqraXlUfqKonjcY2J/lCd9+/zHMCAAAAAHAEE51zeLmq6keTbE3yfWPD39Tdd1XVxUn+uKo+kuSLJ3DO
5NcnSQPe5gXMrA+ySlDIasMhawyBHLKUMgqQyGrDIGcsl5N8pvDdyW5cGz9gtHYIarqcUlekuTK7v7ygfH
uvmv07+1J3pPkkUn2JnlgVR1oah/xnKPjbuzurd29dX5+fuVXAxMgpwyFrDIUssoQyClDIasMhawyBHLKejX
J5vBtSS6pqouq6vQkT09y8/gOVfXIJDdkqTF8z9j4g6rqAaPPD0nyPUk+2t2d5N1JnjLa9VlJ/mCC1wAAAAA
AsCFNrDk8mhf4miS3JvlYkpu6e2dVXVdVV452+++UkZyZ5c1XtqKoDzeO/k2R7Vf23LDWDf6G7D7zI7oVJrq
2qXVmag/hVk7oGAAAAAICNaqJzDnf3LUluOWzpWOfH3eU496X5BFH2XZ7kitWsUwAAAAAgJkzyWklA
AAAAABYpzSHAQAAAAMAM0hwGAAAAAJhBmsMAAAAADNIcxgAAAAAYAZpDgMAA
AAAzCDNYQAAAACAGaQ5DAAAAAAwgzSHAQAAAABmkOYwAAAAAMAM0hwGAAAAAJhBmsMAAAA
AADNoos3hqtpWVR+vql1V9aIjbL+2qj5aVR+uqj+qqm8ajV9eY1VfU/q/q2rHaLl8ktcAAAA
AF46tGxAe2S0/VLhg811Kz6O86eoWZ1o3IPHpmcMhSyuvY8N0+OrE6HvJ4YOWUSVuM+nGRz+K4k
F46tXzAaO0RVPS7JS5Jc2d1fHhs/O8nbk7ykuz9wYLy7P91Lvpzkd7I0fcXf0N03dvfW7t46Pz+/XhfEbTpv
ZsOu3QeG06bS7nnLVpShWtT3K6fsnwoYaaVX/H2TPUrG5U7sEjk1OGQlbXnufmyZHV6ZDXEyOnTMJq3I
eTbA7fluSSqrqoqk5P8vQkN4/vUFWPTHJDlhrD94yNn57krUled/iL50bfJk5VVZInJfnLCV4DJ2nL5jNy/VWX
HwzogTlPtmw+Y8qVwfLI8Mbg7wjT5R4EODGemwyJvML0rcZ9OLEX0nX3/VV1TZJbk5yS5NXdvbOqrkuy
vbtvztI0EmcmefNSrzef7O4rk1yV5DFJNlfVs0enfHZ370jyu1U1n6SS7EyTyTy2DZy8ubnKtsvOy8Of/+jcc99
CzjnLW0sZFhneGPwdYbrcgwAnxnOTIZFXmL7VuA8n1hxOku6+Jckth429dOzz445y3BuSvOEo2x67mjUy
OXNzlYvnz8zF82dOuxQ4KTK8Mfg7wnS5BwFOjOcmQyKvMH0rvQ8n2hxm41lc7Ozeuy9337uQc8/2/wq
ysck7s0z+WU3yBLD2PHuZFtljnDysf8dtDlfVA8ZfFHe0MTa+xcXOO3d+JtfetCML+xcPzmOy7bLz3NhsOPL
OLJN/VpM8Aaw9z16mRfYYJw/DsJwX0r1/mWNscLv37jt4QyfJwv7FXHvTjuzeu2/KlcHqk3dmmfyzmuQJY
O159jltssc4eRiGozaHq+q8qvr2JF9XVY+sqm8bLd+f5OvXrELWjbvvXTh4Qx+wsH8x99y3MKWKYHLknVk
m/6wmeQJYe569TIvsMU4ehuFY00r8cJJnJ7kgyfVj4/cl+X8mWBPr1Llnb8qm0+YOubE3nTaXc87aNMWq
YDLknVkm/6wmeQJYe569TIvsMU4ehuGo3xzu7td29w8keXZ3/8DYcmV3/6c1rJF1YsvmM3L9VZdn02lLs
TkwV8yWzWdMuTJYffLOLJN/VpM8Aaw9z16mRfYYJw/DcNwX0iV5W1U9M8mW8f27+7pJFcX6NDdX2X
bZeXn48x+de+5byDlnecskG5e8M8vkn9UkTwBrz7OXaZE9xsnDMCynOfwHSb6Y5INJvjzCcljv5uYqF8+fm
Yvnz5x2KTBx8s4sk39WkzwBrD3PXqZF9hgnD+vfcprDF3T3tolXAgAAAADAmjnqnMNj3ldVj5h4dJAAAAAA

ArJmjfnO4qj6SpEf7PKeqbs/StBKVpLv7W9emRAAAAAAAVtuxppX4+2tWBQAAAAAAa+qozeHu/l9JUlUP
PsLm+yZWEQAAAAAAE7ecOYc/lGRPkr9K8onR591V9aGq+vZjHVhV26rq41W1q6pedITt11bVR6vqw1X1
R1X1TWPbnlVVnxgtzxob//aq+sjonL9eVbXciwUAAAAAYMlymsPvSvL3uvsh3b05yROSvC3J85L8+6MdVF
WnJHnlaP9Lkzyjqi49bLe/SLJ1NH/xW5L8LvSHJFkpdV1YNGx/xmkh9Pcslo2baMawAAAAAA
YMxymsPf2d23Hljp7j9M8l3d/YEkDzjGcVck2dXdt3f3V5K8MckTx3fo7nd395dGqx9Gqx9IcsHo8w8neVd3f667
P5+lBvW2qnpokrO7+wPd3UleI+RJy7gGAAAAAADGLKc5/OmqemFVfdNo+RdJ7h59M3jxGMedn+SOsfU
7R2NH89wk7zjOseePPi/nAAAAAAAHMFymsPPzNI3ev/f0fKw0dgpSa5ajSKq6keTbE3yy6txvtE5r66q7V
W1fc+ePat1WlhVcspQyCpDIasMgZwyFLLKUMgqQyCnrFfHbQ5392e7+ye7+5Gj5Zru3tPdX+nuXcc49K4k
F46tXzAaO0RVPS7J5Jc2d1fPs6xd+VrU08c9Zyjum/s7q3dvXV+fv54lwlTIacMhawyFLLKEJxITs+/8GGpqn
WxnH/hw9boN8R64ZnKUMgqQyCnrFenHm1DVf1ad//zqvrPSfrw7d195XHOfVuSS6rqoiw1cJ+epW
MRya5Icm27r5r5nbNOtSf712EvofijJi7v7c1V1b1V9Z5I/S/JjSX7jOHUAAMAgferOO/K0G9437TKSJG/6ie+ed
gkAAKyyozaHk7x+9vMyrMWLUUUzwjSZw/Az4/nSHLY2EvHPj/uGMe+
OsmrjzC+PcnfPZE6AAAAAAA41HHnHK6qH0o7R/xIF6egMq+uXV9XNky4MAAAAAAIDJOW5zOMnPJPmM7aPJL
3JLlogjUBAAAAAADBhy2kO7+/uLx429jdeUAcAAAAAgoB5Uwr8Z4kH0SpLxKjUnDNZMAAAAAAYLKW0xz+Snd3kk6SqjpjpWqgvjUBAAAAAADBpy2kO3
1RVNyR5YFX9eJL/L8lvT7YsAAAAAAAAm6dRl7POrsR6X5N4k35LkpUneO8miAAAAAAACYrOU0h1/V3f84yb
uSpKrOTHJLkh+cZGEAAAAAAAEzOcqaVuKuq/n2SVNWDkvxkhkdjMdMtCoAAAAAAACbquM3h3v7v4n5XSf66qn4rS4T
3hX+3u35l4ZQAAAAAAAATMxRp5WoqiePrf5Zkn+R5H8k6ap6cnf//qQLAwAAAAAAAGbhHO/F9OSLAwAAAAAAAgMo415/CPHLb+F0lOG
413Es1hAAAAAICBOmpzuLufs5aFAAAAAAACwdo4753BVvbaqHji2/pqi2/qCqevVyTl5V26rq41W1q6pedITtj6m
qD1XV/VX1lMO2fbWqdoyWm8fGL6qqPxud801VdfpyagEAAAAA4GuO2xxO8q3d/YUDK939+SSPWPN5BV
XVKklcmeUKSS5M8o6ouPWy/T1e5M8o6ouPWy3TyZ5dpLfO8Ip/nd3Xz5arhwb/8Ukr+jub07y+STPXcY1AAAAAAwZjnN4b
mqetCBlap6cI49V/EBVyTZ1d23d/dXkrwxyRPHd+ju3d394SSLyym2qirJY5O8ZTTT02iRPWs6xAAAAAB8z
XKaw7+a5P1V9bNV9XNJ3pfkZx3PlSl5Zx3PlJ7hhbv3M0tlybqmp7VX2gqg40gDcn+UJ333+8c1bV1aPjt+/Zs+cEfi
ysHTllKGSVoZBVhkBOGQpZZShklSGQU9ar4zaHu/t1SZ6c5O4kn0y5ny+/aQLS/JN3b01yTOT/FpV/a0TO
bi7b+zurd29dX5+fjIVwgrJKUMhqwyFrDIEcsp1Qy5DlasMgZyyXi3nhXQPS/Gjueu5JcOlZ+w
WhsWbr7rtG/tyd5T5bmOd6b5IFdWBaixM6JwAAAAAS5YzrcTbk7ttPxRktuTvZGJMGquiqK
/y9Cw1l4+rqh5UVQ8YfX5Iku9J8t7iTvTvKU0a7PSvIHyzknAAAAAABfs5xpdK2SW5N8M8L8M1N3b2zzq6qq6riqTk
5Pck2SW5N8LMlN3b2zqq6rqiu7TpKoeVVV3Jnlqkhuaufo8L+TZHtV/bcsNYN/obs/OtrmWwhTXVtWuLM1B/
KoTuWAAAAAAAJJTj7/Lobr7Q1X1Hcvc95ykt7dlaWqIw497X5X5JHHOWct2epQQ0AAAAAwEk6b
nO4qq4dW51L8ugknZqPkMb9YliHHP4rLHP92dpDuLfn0w5AAAAAACsheM2h2h7v75WtRCAAAAAA
Aa2c500r87SQ/nWTL+P7d/djJlQUAAAAAwCQtZ1qJNyf5f5rSS/neSrky0HHAAAAAIC1sJzm8P3d/ZsTrwQAAA
AAgDVz1OZwVT149PEPquqfJnlrkvsPbO/uz024NgAAAAAAYOuY3xz++ooTHooAAAAAAAJuRY3xz+YJJOUqP1F4F4xt6yQXTK6ooAAAAAA
Am66jN4e6+aC0LAQAAAABg7cwdbUNVPaqqzhtb/bGq+o2q+pDxN63hHk+9yQ5CtJUlWPS
fILSV6X5ItJbpx8aQAAAAAATMqx5hw+Zeylc09LcmN3/13Ln9mN3/36S36+qHZMvDQAAAACASTnWN4
TPLHY9uO1VQGAAAAGCdO1Zz+D8m+ZOq+oMk/zvJtnyZZJ1VX1zIqaWOK6q2lZVH6+qXVXX1oiNsf0xVfaiq7
q+qp4yNX15V76+qnVX14aq6qp4ayNX15V76+qnVX14ap62ti211TV/6yqHaPl8mVeKwAAAAAI0f9BnB3/3xV/VGShyb5w+7a5JD
95vBNX1SlJXpnk8UnKuTHJbVd3c3c3R8d2+2TSZ6d5KcPO/ZLSX6su/+sqv67/s2/XGdD/QXd/ZbjXx4A
AAAAEdyzOkhuvsvsDRxj7ZkvkrEiSg83j3t492zZrZzt3tJQ/AAAAAWLF
jTSuxUucnuWNNs/c7R2AmpqiuSnJ7kf4wN//xouLXVNUDnLc1VW1vaq279mz50R/LJkWJOWUoZJWhkF
WGQE4ZCIllKGSVIZBT1qtJNodXrKoemkNzRI7ywwiM7d2903dvfW7t7q3t46Pz/+NN7yC1KnNwVKF46tXzAaW5aqOjvJ25S25O8ZHx6i+7+dC/5cpLfdyL0FQA
ThkJWGQpZZQjklKGQVYZCVhkCOWW9mmRz+K+K46k4F46tXzAaW5aqOjvJ25O8ZHx6i+7+dC/5cpLfydL0FQA

AAAAAnIBJNodvS3JJVV1UVacneXqSm5dz4Gj/tyZ53eEvnht9mzhVVUmelOQvV7VqAAAAAIAZMLHmcHf
fn+SaJLcm+ViSm7p7Z1VdV1VXJklVPaqq7kzy1CQ3VNXO0eFXJXlMkmdX1Y7Rcvlo2+9W1UeSfCTJQ5L83
KSuAQAAAABgozp1kifv7luS3HLY2EvHPt+WpekmDj/uDUnecJRzPnaVywQAAAAAmDnr+oV0AAAAAAB
MhuYwAAAAAMAM0hwGAAAAAJhBmsMAAAAAADNIcxgAAAAAYAZpDgMAAAAAzCDNYQAAAACAGa
Q5DAAAAAAwgzSHAQAAAABmkOYwAAAAAMAM0hwGAAAAAJhBmsMAAAAAADNoos3hqtpWVR+vql
1V9aIjbH9MVX2oqu6vqqcctu1ZVfWJ0fKssfFvr6PjM7561VVk7wGAAAAAICN6NRJnbiqTknyyiSPT3Jnkt
uq6ubu/ujYbp9M8uwkP33Yq9O8rIkW5N0kg+Ojv18kt18M8jQRtpkAACAASURBVONJ/izJLUm2JXnHpK7
jcIuLnd179+Xuexdy7tmbsmXzGZmb059memSSWSLvTIpsAawNz1uGRF5ZazLHNEysOZzkiiS7uvv2JKmqN
yZ5YpKDzeHu3j3atnjYsT+c5F3d/bnR9ncl2VZV70lydnd/YDT+uiRPyho1hxcxO+/c+zKbT5nL
9VZdn22XnuVmZCplklsg7kyJbAGvD85YhkVfWmswLZOcVuL8JHeMrd85GlvJsJeePPPp/MOVds9959B2/SJ
FnYv5hrb9qR3Xv3rVUJcAiZZJbIO5MiWwBrw/OWIZFX1prMMS0b9oV0VXV1VW2vqu179uxZlXPefe/Cw
Zv0gIX9i7nnvoVVOT+zZ6U5lUnWyiSeqSdK3lmOk8mqbLHW1sMzFZZjtbPqecuk+N//DMHxcipzTMskm8
N3JblwbP2C0dhKjr1r9Pm45+zuG7t7a3dvnZ+zZ2uy6bRDfX4bRDf2WbTpvLOWdtWpXzM3tWmlOZZK
1M4pl6ouSd5TiZrMoWa209PFNhOVY7q563TIr//c8QHC+nMse0TLI5fFuSS6rqoqo6PcnTk9y8y8zGNvTfJDV
fWgqnpQkh9Kcmt3fzrJvVX1nVVSX4syR9Movgj2bL5jFx/1eUHb9YD879s2XzGWpUAh5BJZom8MymyB
bA2PG8ZEnllrckc0zKxF9J19/1VdU2WGr2nJHl1d+++squSbO/iSOm8vqUUnemuRBSX6kql7e3Zd19+eq6me
z1GBOkusOvOvJwuyfOSvCbJ12XpRM8mbpkvsS7w5kumSSWaJvDMpsgWwWwNjxv
GRJ5Za3JHNMyseZwknT3LUluOWzspWOfb8uh00SM7/fqJK8+wvj2JH93dStdvrm5ysXzZ+bi+TONqVcQi
aZJfLOpMgWwWwNrwvGVI5JW1JnNMw4Z9IR0AAAAAAEc30W8Or2eLi53de/de/fl7nsXcu7ZvqrP+iWrDIGcMh
SyCrB6PFMZClllKGSVaZjJ5vDiYuedOz+Ta2/akYX9iwcn+d522XluOtYVWWUI5JShkFWA1eOZylDIKkMhq0
zLTE4rsXvvvoM3W5Is7F/MtTftyO69+6Zvtr9oQdbvs1rYkWWu7SdzkW8ddWWUI5JShkFWA1eOZylDIKkMhq0
zLTE4rsXvvvoM3W5Is7F/MtTftyO69+6ZcGRxKVhkCOWUoZBVg9XimMhSyylDIKtMyk83hu+9dOHizbHbC
wfzH33LcwpYrgyGSVIZBThkJWAVaPZypDIasMhawyLTPZHD737E3ZdNqhl77ptLmcc9amKVUERyarDIGc
MhSyCrB6PFMZClllKGSVaZnJ5vCWzWfk+qsuP3j3THZjTHZcvmM6ZcGRxKVhkCOWUoZBVg9XimMhSyylDI
KtMyky+km5urbLvsvDz8+Y/OPfct5JyzvAGS9UlWGQI5ZShkFWD1eKYyFLLKUMgq0zKTzeFk6aa7eP7MX
Dx/5rRLgWOSVYZAThkKWQVYPZ6pDIWsMhSyyjTM5LQSAAAAAACzTnMYAAAAAGAGVXdPu4aJq6o9Sf
7XKp/2IUk+u8rnXAn1hsd287kQMOy+l6+v0tx5DqVeuhVprVww3p97scrmd9OOGcJkfN6lB/Bysx
a9c8zetd7Wfqcg3lbzyUOpONXetqPlNXw3r6XavlyKZVy0qzup5+hydC3WtrNeqe1n//j2e9/U3Uc3RT/d/+
M9EcnoSq2t7dW6ddxwHqObr1VMtyDa3mIdWr1skaYs3H4no2nln8HczaNc/a9SbDueah1JmodS2tp/rVc
mTrqZYToe61pe71Z71dm3qObtq1mFYCAAAAAGAGaQ4DAAAAAMwgzeGTd+O0Od0eGTd+O0CziMeo5uPdWyXEOre
Uj1qnWyhljzsbiejWcWfwezds2zdr3JcK55KHUmal1L66l+tRzEqrlRKh7bal/7Vlv16aeo5uqAAAAACY
Qb45DAAAAAAwgzSHAQAAAABmkOYwAAAAAMAM0hwGAAAAAJhBmsMAAAAAADNIcxgAAAAAYAZpDgMAAAAAzCDNYQAAAACAGaQ5DAAAAAAwgzSHAQAAAABmkOYwAAAAAMAM0hw
GAAAAAJhBmsMAAAAAADNIcxgAAAAAYAZpDgMAAAAAzCDNYQAAAACAGaQ5DAAAAAAwgzSHAQAA
AABmkOYwAAAAAMAM0hwGAAAAAJhBmsMAAAAAADNIcxgAAAAAYAZNpTlcVduq6nNVtauvqNVtauqXnSE7Y+
pqg9V1f1V9Zsx8cur6v1VtbOqOplV1VvbygEAAAAANoY1bw5X5X1X1SlJKukuTfKMHjTgY0VxzI5WZL5x7OD3t9ZW3RunR
EvJfmx7r4i4F9UcZMyWLKjvCj4y5gzF9UsVyUBc7kuAAAAADYOKYxrcT5Se4e4W79znHZCqucKJBFc+8bPt5+q
qnuSzCf5uAXL6AAAAADYOKYxrcT5Se4e4YW79zNHZCquqKJKcn+R8VVLBAAAAAwMwgzeGTD+qLqUUWJ+dhV9gtHYgtO8T3
VyV5TJJnV9WO9bKXIKUViN1TjUMZqbvXVzedRWfUtTPFXOw8hI93NGbNKk4HdBWOlqdBdTjWFrb2
qNWmwLdDJxqBZDSo73Zmc3gtvTH3MftrMDOZp2gsCuUGwQHWGxw2Ul8UTHSSPb8BYmJiTCarj
bSaeQexzcBSlaYZAVkMDmnMMwWjDgfYtMZcVbM7jPSmcxIWbRmMmRmNhA/fFkr5xYmqqc3V2XhxGIaT/
OMP yLi53de/fl7nsXcu7Zm7Jl8xmZm6tplwUTIe/MMvlnNckTG5l8AxzKc5Fx8rD+rag5XFXf093/9XhjbAyLi

5137vxMrr1pRxb2L2bTaXO5/qrLs+2y89zYbDjyziyTf1aTPLGRyTfAoTwXGScPw7DSOYd/Y5ljbAC79+47eE
MnycL+xVx7047s3rtvypXB6pN3Zpn8s5rkiY1MvgEO5bnIOHkYhpNqDlfVd1XVTyWZr6prx5afSXLKqlbIun
H3vQsHb+gDFvYv5p77FqZUEUyOvDPL5J/VJE9sZPINcCjPRcbJwzCc7DeHT09yZpampThrbLk3yVNWpzT
Wm3PP3pRNpx0amU2nzeWcszZNqSKYHHlnlsk/q0me2MjkG+BQnouMk4dhOKnmcHf/SXe/PMl3dvfLx5
bru/sTq1wj68SWzWfk+qsuP3hjH5grZsvmM6ZcGaw+eWeWyT+rSZ7YyOQb4FCei4yTh2FY0Qvpkjygqm5
MsmX8XN392BWel3Vobq6y7bLz8vDnPzr33LeQc87ylkk2Lnlnlsk/q0me2MjkG+BQnouMk4dhWGlz+M1
JfivJbyf56srLYb2bm6tcPH9mLp4/c9qlwMTJO7NM/lIN8sRGJt8Ah/JcZJw8rH8rbQ7f392/uSqVAAAAAAC
wZk6qOVxVDx59/M9V9bwkb03y5QPbu/tzq1AbAAAAAAATcrLfHP5gkk5yYJKQF4xt6yQXr6QoAAAAAAA
m66Saw9190WoXAgAAAADA2lnRnMNV9eQjDH8xyUe6+56VnBsAAAAAgMlZ6Qvpnpvku5K8e7T+/Vma
cuKiqrquu1+/wvMDAAAAADABK20On5rk73T33UlSVecmeV2S70jy3iSawwAAAAAA69DcCo+/8EBjeOSe
0djnkuxf4bkBAABY586/8GGpqnWznH/hw6b9KznEevr9rLffDQDTt9JvDr+nqt6W5M2j9X84GjsjyRdWeG
4AAADWuU/deUeedsP7pl3GQW/6ie+edgmHWE+/n/X2uwFg+lbaHP5nWWoIf89/XVJfr+7O8kPrPDcA
AAAAABMyIqaw6Mm8FtGCwAAAAAAA3FSzeGq+i/d/b1VdV+SHt+UpZ7x2atSHYO2uNjZvXdf7r53Ieeev
SlbNp+RubmadlmwbDK8Mfg7wnS5B5l17gFgI/OMg+lb6X14Us3h7v7e0b9nnczxVbUtyb9NckqS3+7uXz
hs+2OS/FqSb03y9O5+y9i2ZyX5l6PVn+vu155MDUzW4mLnnTs/k2tv2pGF/YvVn+Ydt1/6VlwQAAAAAw
QZHhj8HeE6XIPMuvcA8BG5hkH07ca9+HcSouoqu+tqueMPj+tqeMPj+kqi46zv6nJHllkickuTTJM6rnq0sN2+2SSZyf5
vcOOfXCSlyX5jiRXJHlRVT4opdA6tu3b2Zm7LptEPjtem0uZxz1qYpVbQ+yen6JcOH
GmpW/R1nz1CzulG5B49MTmfH0O8BWWUoZHU6hv6MW2tyyiSsxn240ubwV7q7M3opXVWdscLzrZru
vrG7t3b31vn5+WmXM3O2bD4j1191+cGAHpjzZMvmdRORdUFO1y8ZPtRQs+rvOHuGmtWNyj14ZHI6O4
Z+D8gqQyGr0zH0Z9xak1MmYTXuw5N6Id2Ym6rqhiQPrKofT/KPk/yH4xxxzV5ILx9YvGI0tx11Jvv+wY9+zzG
NZQ3NzlW2XnZeHP//Ruee+hZxzlreWMiwyvDH4O8J0uQeZde4BYCPzjIPpW437cEXN4e7+lap6fJJ7k3xLk
pd297uOc9htSS4ZvbjuriRPT/KPThtDG8M/o4wXe
5BZp17ANjIPONg+lZ6H66oOVxVz03y3u5+wXKP6e6vjbPTqQm6u/6qv6XKF7Q6zZd3WRrt7TqVT0hEQDeQwdnYD8bjBhFBiZm
8SFW9vLsv6+7PVdXPZqnBnCTXffinVnINAAAAAAACzaKXTSjwsyQ1VtSXJB5O8N8N8mfdveOYx3U3bckueW
wsZeOfb4tS1NGHOnYVyd59YqqBgAAAACYcSt6lV13v6y/y7H5vksiR/muQFWowAAAAAACwjq10Wol/m
eR7kpyZ5C+S/HSHWmsQAAAAAKxjK51W4slJ7k/y9iR/kuT93YWfVcFcFAAAAAAMBErXRaiW9L8Rgkf57k8Uk+
UlX/ZTUKAwAAAABgclY6rcTfTfLoJLoNXvmn8ip56kxuSp9bpx6JGiQQWE3RtnWs9ZyB1LYm7J3N+YTKUuCs
ATTcCJkfbRYu09m4XBAgV81IRdq+F0mEXISvrTSP+0KwcedwJD4KgRdvuXIkRmclGw/5mDhFrgBYaOWmsFzsl1z4jdHs0
XXM4QT7nNmz8jz7D55yMnSJH6JMp/zL9WGnVcYQXjTezUTEstlVDDjYVG9zXQVXPdnZIVqnSoEoOnaoHxhw5LS
q5aGRpgoqcF9uE6NPxYDZAKeWcCxEnPkhw8g6IeU1OlOtwoCs79vQuVC9LaD0UHaTo5Z5ycMD2pGEjMhSXD5
v5pLtQbmHA9k+AFmrDvwlBcfpmFR3O/eIuZAE3ffvYNfFHPvh2ggAz1cEU3Vt6nsRpW+5zq5dPKfVSvOPiIjDmi9
ewVeAtQ4j5NASbR5KqKWFXMVG7PQbrFMvBt5kNKhbnF2a1d7sMM5F3hHQfY0CSg/wqOaNe1WzXI+mTrHpl
RYkzoAxsoW2yb4VQjhgjB3YBI0H94xZt5+FqFBGh5cnQdmo4SVqK8d/dkcTG71vsMOhKSZ7qKdUyzWDTtdCu5p
AXKdqo1JUsuxF4NGf1j0+Cym1rtkqxsu2pZknKDeKWc1h/lbLt9ttJwQC61oe/7ubsDrgDXmshePc0Rlr5K0Wkm
+XGJ/XrDZ9rK1VB8h6k1OyHTbmnlqgc+M8N5ubLCbKb09kNWthxn7qd97xKzF/F4VWYeL5VHn8fSbB3mpS27lTWM
2krzb/tSJV5uC8ft4Uk0xlSYnv3IZRMq6dqS6q5JgxGKwvzZRBQdYgMUAlp29BLv45NYTamoeLK6aTdZMnRbJNlg
OrDO6JaYTDvtEw9+3Rv5v1nHvKGoOIUFRFXGS+xSyTKf3TozXcSNgkFLLTFl0L8yKl9Zk8zSZnfW+W4lXBkkLfJ0Ah
UPiIkzEHx7sLX1mb8Uva4lkUDgKSfNo+4kCxpnk9v6VyAqoC25iLgCNUEh0ZcRdhgG1qeO2+KyN6fD8e2Kd9ZL5Ra
8nG9+/Pb7cEK1D2e8dMNKDHLMzvmpdjyqUTxGBbVXU8SstnV+zQNz7O3L/Zgg3qz1wKm6h2PT4VHHmJyD3wKG
eTdr/EoLfjC6NVb2TtKTg8EQ2F8EyGXd+6fqHs1L0oL0k2WZZlKs2qUfL/HW8nNuN5EWgPcynxdRrj1d+ZjLN/0OUQ5
k0HaWn2G+xJgFGBT6UbT8L/YSCKxN2eN5AjUdeohIBUdb/QQ3Op/N7pf3PTUw8gMzQ7zO1XqcfrIuy+sVFpLDL2Bh
JBm+ysNNzIA+AahNU3tUB2lfqxHpYnJmFI8oNQIW/ZCv3dfTbY6xQC/dwYBKyWvfJXb2ZG9u5/zD9ejOQP1eBK7K
+ynW1m67fe14Wm7gvWN3oYdWo96zuMhuM+K/9RyIWNzX5Pn0Tb43E6XGyGTyxV8bW9u18GpGMuhfsoJRC+3Oz4q
wr6Cf12NOeHUYtQAzHDKLnFLpLGO+LWEXrwRjVsc4OfB5Xa1ocnHeE6eAfKUGrBdn1KGhJGY8hX4PVxNUaFfIh
c2oIuA3ZY3tW3bV+VXZNhWdrDaO8uNDGMi9yxTCFDXbdPKRqCcSfrEYrW0HVWYuQR3Ohs9KHQMmexR4hRR2
jTRgkxg81nS7VjFbJ8vTzO4HI5Ia1akG/zr3OVYZpIP1qL7ZVFL8EmrsbI0FfKyI1s5/2mDtH6rNzVIa6fyJvfRmz
ntT8Y4xuIHUxj4nYh6dXxqpYtqCg/t9M+W5sSy/VEXbjdrKCkr4xwh0rBEfKnWgFdbJrz6yfQvV7Y9jbGnCfSUd+ZPV
o7t5Q+fEd0LbKJMjI9xAmf6rLHuH/FuDBm84HW5VL8J8KPX5qsPRl1A7D5pUiq9sQbWqALJhfiVV0XZyvsO2vUTQrU
ltkhJ+1yj4X3WxKLbdJhrtxDdKvH9O53Kk9x4TYrjM8M5Q54Zl7+FzI6/ksMpBfcAbIyr6kxdCjAFGuaKIgZf2I+/Vq
pnkgmpAEHjn/YG5jb+wxe9JTsWnCpu5Wk5tLfHIrh/N4VBY74NmhrcZq4nrmC5Ww3BRBFxIeU0bh+o/p6e7bu2lv
gK0dU6nUBQaSLo6gLKNSC2xnkKvnJn6xaZhNgk+IpPW42OsJqrBxKm56fS8cqi1/C6Z+pYz0dH2i5v0W4dJLkrNE3
N+Sz1NmfU0mrYspzx0Y4WJTNGJ1Q1P9BWTrKpP0+7fGfUBFaU8CaT9B/hBH4jMGkT8b9dzsDVb3O1Go6XmH8Lqbz
cLRjl9G8p6e3Mq/7/bSy3tY6jrYC0ZU3iRMB5jfFkrX5zZwMeUtvMR+KRO6HF9cn4MF3uBCk4wv+rYx0jMXnZ0bC

q/sUa1AsAAAAAsOEM7YV0pyb53iT/aPTvP6iqHzzSjlV1dVVtr6rte/bsWcsaYdnklKGQVYZCVhkCOWUoZJ
WhkFWGQE5Zr6bRHL4ryYVj6xeMxo64z2ie4W9IsjdL3zJ+b3d/tru/lOSWJN92pB/S3Td299bu3jo/P7/Klw
CrQ04ZClllKGSVIZBThkJWGQpZZQjklPVqGs3h25JcUlUXVdXpSZ6e5ObD9rk5ybNGn5n+S5I+7u5PcmuQRV
fX1o6bx9yX56BrVDQAAAACwYZy61j+wu++vqmuy1Og9Jcmru3tnVV2XZHt335zkVUleX1W7knwuSw3kd
Pfnq+r6LDWYO8kt3f32tb4GAAAAAIChW/PmcJJ09y1ZmhJifOylKY58Xkjz1KMe+IckbJlogAAAAAMAGN7Q
X0gEAAAAAsAo0hwEAAAAAZpDmMAAAAADADNIcBgAAAACYQZrDAAAAAAAAzSHMYAAAAAAGAGaQ4D
AAAAAMwgzWEAAAAAgBl06rQLGJrFxc7uvfty970LOffsTdmy+YzMdW0y2KGySSzRN6ZFNliaGQWYPI8a
1lrMsc0aA6fgMXFzjt3fibX3rQjC/sXs+m0uVx/1eXZdtl5blamQiaZJfLOpMgWQyOzAJPnWctakzmmxbQSJ
2D33n0Hb9IkWdi/mGtv2pHde/dNuTJmlUwyS+SdSZEthkZmASbPs5a1JnNMi+bwCbj73oWDN+kBC/sXc
899C1OqiFknk8wSeWdSZIuhkVmAyfOsZa3JHNOiOXwCzj17UzavbNNpcznnrE1TjLPEnlnUm
SLoZFZgMnzrGWtyRzTojl8ArZsPiPXX3X5wZv1wPwvWzafMeXKmFUyySyRdyZFthgamQWYPM9a1prMM
S1eSHcC5uYq2y47Lw9//qNzz30LOecsb45kumSSWSLvTIpsMTQyCzB5nrWsNZljWjSHT9DcXOi+TNz8fy
Z0y4Fksgks0XemRTZYmhkFmDyPGtZazLHNJhWAgAAAABgBmkOAwAAAADMIM1hAAAAAIAZpDkMAA
AAADCDptIcrqptVfXxqtpVVS86wbxUVS86wvYHVP3P2/7N19lGV3WSf671PpxpJOGkNTSTAvdiLRDBFuq03w4sCMokzr
EsJysCHqCFeu0etgnJtRQZ0BzcgsX+YGF8IgUSOCCkQchzg3EPEF5V5eJi22QuNFQmwglaQ7HaRDY2GH+t
0/+nRTXanqqtNd52XX/nzW2ivn5KkqKbr6pvWtCtPC7z9d4d4PefaTWJYSXuSXL
Ko6K8mrk3xkruT3FFVt7bwPRrRcm+bwDPrRotRcm+XRr7XFV9bwkv5DkuYuW35DkWdx8jCy/5DR3Lf4fmcv3U227d
tycxMnckuYSRklS6QU7pCVukKWQVYP66pdIWsMgljbw4nuSrJna21R5qprdKi5u5Kkqt6fJ8VDVyfmcHrtyR5V
VVVa61V1bOT/H2SI6dbwMJCy9vD9rSrX37I380cXMrt5Jjfu3pFdV17gpGOOqyCpdlKd0hazSFbIKsH5cU+kK
WWVSJjGsxIVJPrHo/eO/d2d2ecuu01p7p7kN+TpTrxSDdecuu01p7KMlnkmyrqrOTvDjLq672IVV1bVXtqao9o9BwGnZ/kNHTTpxsSTJ/dCH
X37I3+w+ddr8ZTsupcprIKtPDNZWukFWW6OwO8/XbFaVmFa+P2nC/z/+6nZtr+JupZ2UT/7d+L5v
2tt59zc3EnL7js8f+JkO27+6EOPDi/nrXCqk6V00RWmR6uqXSFff/pitWyCtPC7z9d4d4PefaTWJYSXuSXL
xovcXDeYtt87dVbUpyaOSHEry5CTPqapfTPKPqxOsSSoawmqyrWS/dpZg2KiJLQNYepYUntaXJPVjnxFjAcXw7
hfIKV0hq3SFrAKsH9dUukJWWmZRZRJ3Dl8R5LLq+rSqqrSrSqnSzrsqGtiMSaHEoiqr4fJN3DrSpMSW0U
2MZwk27dtyY27d2R287HDPz6Oy/ZtW07zkGA0ZJUukFkO6OqFtbClkFWD+uqXSFrDlpY79zuLX2UFW9KMn
tSc5KcnNrbV9V9V3ZBkT2vt1iS/NeKdS2nZmZmKruuvCBXXPfUHHwPuCdd4fXmZsdSKrkHvCdnmjNVJJkdSB7Kt5lfkFVFLrKwrO4
QVbpCVgHWj2sqXSGrTMokhpVla+22JLctW3bDotePJPnGk3zG9yx7/v4k68+gN/OpnL5PMsGsvHx4H
V8gqXSGrAOvHNZWukFWWpUMoWsPpAtCdhtAMAAAAAJCUBq1oDgOtDGDKdD/sBBdxqyAlBhHREf5YdDYE
H1vn3T4myf3rM8jbzZfxvmdjdmtyzdncvmzp50KbAiOaLAuzaKaZPtavGmazKEwLFiTG6mrQVkNgLmsSmf
1seZTcTwbTx+/g74dc9+ON+nOMXelzkSt4zRN9atledNUyzDUPV7qnj7TdmzqWdlEazHmMAAAAABAD7l
zGAAAAACghzSHAQAAAAB6SHMYAAAAAKCHNIcBAAAAAHpIcxgAAAAAYAZpDgMAAAAAzSHMYAAAAAAGAGaQ4D
AAAAAMwgzWEAAAAAgBl06rQLGJrFxc7uvfty970LOffsTdmy+YzMdW0y2KGySSzRN6ZFNliaGQWYPI8a
1lrMsc0aA6fgMXFzjt3fibX3rQjC/sXs+m0uVx/1eXZdtl5blamQiaZJfLOpMgWQyOzAJPnWctakzmmxbQSJ
2D33n0Hb9IkWdi/mGtv2pHde/dNuTJmlUwyS+SdSZEthkZmASbPs5a1JnNMi+bwCbj73oWDN+kBC/sXc
dJdgz28+gkdyb5o0Wr/Hhr7S2jqh0AAAAAYKMbWXM4yVVJ7J7myt3ZUk3VfmFWmJFcnOdEcbq3tHyxbxOMV+
npPkba21z42uVAAAAAACAfhnlsBIBJXTPVOvd3Dk+YpfzqMJBwGnPmPjCKdlaFY5KBuDJ7ZtjZf48Q3

quqxSZ6Q5PZFs38yyRVJnpTk0UlevMK211bVnqrac/DgwZHXCqdDTukKWaUrZJUukFO6QlbpClmlC+SUa
TXK5vA9SS5e9P6iwbxh7E7yB621o8dntNbubcd8Pslv5tjwFQ/TWruptbaztbZzbm5uyI+F8ZBTukJW6QpZ
pQvklK6QVbpCVukCOWVajbI5fEeSy6vq0qp6RI4ND3HrkPu4JkuGlBjcTZyqqiTPTvLBdagVAAAAAKBXRtYc
bq09lORFOTYkxN8muaW1tq+qbqiqZyVJVT2pqu5O8l1JXltV+45vX1Xbc+zO4z9fsuvfqaoPJPlAksck+blRH
QMAAAAAwEa1aZQ7b63dluS2JfNeuuj1HTk23MRy2+7PMg+wa6198/pWCQAAAADQP1P9QDoAAAAA
AEZDcxgAAAAAoIc0hwEAAAAAekhzGAAAAACghzSHAQAAAAB6aNXmcFVdupZ5AAAAAAB0x1ruHP79Z
ea9Zb0LAQAAAABgfDattKCqrkhyZZJHVdV3LIq0NcsJ+nqJN+R5MuSPHPR/AeT/
MAoiwIAAAAAYLRWbA631t6a5K1V9b+21t4zxpxpoAAAAAABixU905fNydVfVTSbYvXr+19v2jKgoAAAAAgN
FaS3P4rUneleSPk3xhtOUw7RYWWVfYfOpL7Ds/n/K2z2b5tS2ZmatJlwUjIO30m/6wneWIjk2+mlWwC08C
1aPqtpTn8yNbai0deCVNvYaHl7fs+letv2Zv5owuZ3TyTG3fvyK4rL3Bis+HIO30m/6wneWIjk2+mlWwC08C
1qBtm1rDO/6iqbx95JUy9/YeOnDihk2T+6EKuv2Vv9h86MuHKYP3JO30m/6wneWIjk2+mlWwu78KLL0lV
Tc104cWXTPorOcF3wyi4FnXDincOV9WDSVqSSvJTVfX5JEcH71trbet4SmRa3Hd4/sQJfdz80YUceHA+l82
dPaGqYDTknT6Tf9aTPLGRyTfTSjaX98m7P5Hnvvbdky7jhDf/4FMmXcIJvhtGwbWoG1a8c7i1dk5rbevgvz
OttS9d9H5NjeGq2lVVH66qO6vqJcssf1pVvb+qHqqq5yxZ9oWq2juYbl00/9gn2n2uqkcMc8CcvvO3z
mZ288mRmd08k/POmV12/YWFlrsOfjbv+ej9uevgZ7Ow0MZRJqyLYfPO9HItGp78s57OO0ee2LjWcr30O8
Sw1iMzfsuBaeBaNB5n+rux6rASVfV1y0xfWVWnHK+4qs5K8bk35bk8UmuqarHL1nt40lekORH
WdgymZy2a/wtJXtFae1ySTyd54WrHwPrYvm1Lbty948SJfXysmO3btjxs3ePjyynz7K9+Va37tffn2V74rb9/3
Kf9jmM645NxH5uee/TUn5f3nnv01ueTcR064MobhWnR6hrnew6ksLLT8/aHP5keffrk8/
sGy
heV2sFRVVZJvTvLdg1m/leRnkrxmLdtzZmZmKruuvCBXXPfUHHhwPueds/JTJlcaV+aK657q/zpAJ3z805/Lr
/zpR/LCf35ZqpLWkl/504/k6y45V4Y7xLXo9AxzvYdT2X/oSF70u3+Vcx/5iBIFPX05lKHv/Yc+SJDWG166XflYa
1XpnxWw5MA9ei0VuP3421NIc/meSFrbV9STK4+/eGJD+R5L8lWak5fGGSTyx6f3eSr6pmqmNmq2pPkoe
S/Hxr7b8n2DbkH1prDy3a54XkxLbVxV1ya5NkkuucRA5utlZqZy2dzZqwbMuDJrI6fT677D8/nYoX/Mq//szpP
m9zXDXc2qa9HpW+v1ftp0Nasb1fFz8N7PzJ90PX3KV27L9sd0K1vrSU43llNdL7v+OySr47eemenqb/npkF
W6oK857dO1aBLW43dj1WElknzV8cZwkrTWPPpTkiuN3BI/QV7TWdubYXcK/XFVfOczGrbWbW2s7W2s7W2s7
5+bmRlMhKzKuzNrI6fSS4ZN1Nav+jv3T1axuVM7B5clpf3T9HJDV8et6ZiZFVukCOWUU1uN3Yy3N4X1V9Z
qq+heD6b8m+VBVfUmSo6fY7Y96p4kFy96f9f9Fg3pq01u4Z/PeuJO9M8rVJDiX5skXjHQ+1T8bHuDJ0nQxvDP6
OMFnOQfrOOcCwZAaAYazH78ZahpV4QZIfTvLvBu//VMvBu//3yQ/lmON4W86xXZ3JLm8qi7NsQbu8/LFsYJPqarO
TfK51trnq+oxSb4Xb4xyS+21lpV/VmS5y5lR5U5LnJ3nrWvbJeBlXhq6T4Y3B3xEmyzlI3zkHGJbMADCM9fjdWLU
53Fr7xyT/12Ba6rOn2O6O6hqnpRkRktuRkJXk5tbavq6qqqbavq6Icme1tqtVfWkH/KJH+Q5Nwkz6yqnynyV57eBBdT
M5Nubw8QfZvTjJm6rq55L8LfWOvBMl7GlaHrZHhj8HeEyXIO0nfOAYYlMwAM40x/N1ZsDlfVLVa21VLa213VX
1gSRt6fLW2hnX7bYkr7/7iRPWGGfdyW5W5arXPBgAAAABgZae6c/hB/hB//9jnEUAgA
AAADA+Kz4QLrW4sMOwrW2r2D/35sMOvywesDSR4YQ20MuAMPDZFFAFq82AAAAAIzd0hazSMuvLfR1k
UAAAAACl7+8XmkaVZ30vyZrZ1+Kq
eSfGlVfWuS30vyh6MtCwAAAACAUVpLc/glSQ4m+UCSH0SxyW5L/MMqiAAAAAAAAYrU1rWOebkvx2a+3X
Rl0MAAAAAAADjsZY7h78vyV9X1Xur6peq6ol6la9kW
AAAAAIDptGqDt6q+N8lTkzwhyf1JXqSveL9ZSE+1ZZvU1H3/3dEA5YwIkm4vpk1gV1yE9kqPbAZnWmE9ay
6PUnq+pAkrkk/xAAAAAAAM7YWoaVOF0XvJoQeyHvMUe6mZjcA/oeTn1J2Gcq3JnZQIAAAAAA
9M8om8NnrKoem+QNSf631trxXLBscM9bFJOy7bAuNSXcR7OrN2xbUYArQl6o7vwBmdK9WQSlF36vD2MtOB89WJldIsCkLQOIOYiJe5kGv
rpBVukJW6QIW6QI5ZVqt2ByugI+pqleuNK1h3/ckuXjR+4sG89cGh9SG89akqrYm+b+T/HRr7b3H57fW7H57fW7m3hfD7Jb+bY8B
UP01q7qbW2s7W2c25ubq0fC2Mlp3SFrNIVskoXyCldIat0hazSBXLKtDrVmMN7znDfdyS5vKouzbGm8PO
SfPdaNqyqRyT5gySvX/rguap6b6GvtZAqqqqJM9O8sEzrBMAAAAAoHdWbAA631n7rTHbncuoql5n8Dry
W5ubW2r6puSLKntXZrVT0px5rA5yZZZlX9bGvtyiS7wtyibaqaqesFgJy9ore1N8jtVNZekkuxN8kNnUicAAAA
AQB+t2Byuqj9Ya9Ay9Mm0lZa3l71mo7b63dluS2JfNeuuj1HTk23MTS7X47yW+vsM9vXu1zAQAAAAA4tVMNK/FFF
xlYFAAAAAABjdaphJf78+Ouq+tIlO7WaZL2AKmKmZ1V1aoqmfm2Ni+bx+831FVt466mMAAAAA
ARmfV5nCSn0lyVZ/SJLBQ+EuHWFNAAAAAACMu2Fqaw0dba59ZMm/FB/FB9UBAAAAAD9TvVAuP2VdV
3Jzmrqi5Pcl2Sd4+2LAAAAAAARmktkdw7J/SIrk3w+yRuRy4enUYTBBAAAA
ADABrBqc7iqivirjJjyXZvnj91to5pbq91to3j64sAAAAAAABGaS1jDv9vZ/K9ekl9N8cgAAAAAGIe1Nicfaq29ZuSVAA
AAAAwWis2h6ht+rl46zEAAAAAAAxmdmpQVV9aSqumDR+++v+nqXxxuRKnn/kFnAOkfKgu+cn/zCW5b/5+FRFAQ
AAAAAwWis2h1trl46zEAAAAAAAxmdmpQVV9aSqumDR+++rqrdW1SsXDTkBAAAAAEHrdgcTvLaJP+UJ
FX1tCQ/n+T1ST6T6ka17LyqdlXh6vqzqp6yTLn1ZV76+qh6rOUuWPb+qPj9yTcX0Xcr0xvdXS/
QIAAAAAcGqnag6fteihcK89NrFdba/8xyeYnVm23FvnZX1Um+Lcnjk1xTVU4/hk7wgye8u2fbRSV6W
5MlJrkrysqqa5o6v8eu1R+IMnlg2nXarUAAAAAAHCyUzaHq+4r4r79cV5ZlF3Zpr7/9
5MlJrkrysqqa5yyu9c6e6dd7XD4NUl+IMnlg2nXarUAAAAAAHCyUzaHq+r4mMRPT/Kni5ad6cmf2xx12V5M7W2l2ttX9K8

qYkVy9eobW2v7X2N0kWlmz7r5K8o7X2QGvt00nekWRXVT02ydbW2ntbay3H7mR+9hpqAQAAAKALZja
lqqZmuvDiSyb9jcDInKrJ+8Ykf15V9yf5xyTvSpKqelyODS2xmguTfGLR+7tz7E7gtVhu2wsH093LzH+Yqro2y
bVJcsklTmKmk5zSFbJKV8gqXSCndIWs0hWyugEtPJTnvvbdk67ihDf/4FPOeB9yyrRa8c7h1trLk/z7JK9L8s8
Hd+oe3+ZHRl/amWmt3dRa29la2zk3NzfpcmBZckpXyCpdIat0gZzSFbJKV8gqXSCnTKtTDg/RWnvvMvP+b
o37vifJxYveXzSYt9Zt/+WSbd85mH/Rae4TAAAAAICBU405fKbuSHJ5VV1aVY9I8rwkt65x29uTPKOqzh08i
O4ZSW5vrd2b5HBVfUNVVZLvS/LWURQPAAAAALCRjaw53Fp7KMmLcqzR+7dJbmmt7auqG6rqWUlSVU
+qqruTfFeS11bVvsG2DyT5TznWYL4jyQ2DeUnyw0l+PcmdST6a5G2jOgYAAAAAgI3qlMNKnKnW2m1Jbls
y76WLXt+Rk4eJWLzezUluXmb+niRfs76VAgAAAAD0yyiHlQAAAAAAYEppDgMAAAAA9JDmMAAAAABA
D2kOAwAAAAD0kOYwAAAAAEAPaQ4DAAAAAPSQ5jAAAAAAQA9pDgMAAAAA9JDmMAAAAABAD2kO
AwAAAAD0kOYwAAAAAEAPaQ4DAAAAAPSQ5jAAAAAAQA9pDgMAAAAA9NBIm8NVtauqPlxVd1bVS5Z
Z/iVV9ebB8vdV1fbB/O+pqr2LpoWq2jFY9s7BPo8vO2+UxwAAAAAAsBGNrDlcVWcleXWSb0vy+CTXVNXj
l6z2wiSfbq09LskrkvxCkrTWfqe1tqO1tiPJv0ny9621vYu2+57jy1trB0Z1DAAAAAAAG9Uo7xy+KsmdrbW7
Wmv/lORNSa5eXsbvVknWsG2wIAAAAAsE5G2Ry+MMknFr2/ezBv2XVaaw8l+UySbUv
WeW6SNy6Z95uDISX+4zLNZAAAAAAAVjHVD6Srqicn+Vxr7YOLZn9Pa+0JSZ46mP7NCtteW1V7qmrPwY
MHx1AtDE9O6QpZpStklS6QU7pCVukKWaUL5JRpNcrm8D1JLl70/qLBvGXXqapNSR6V5NCi5c/LkruGW2
v3DP77YJLfzbHhKx6mtXZTa21na23n3NzcGRwGjI6c0hWySlfIKl0gp3SFrNIVskoXyCnTatMI931Hksur6tIca
wI/L8l3L1nn1iTPT/KeJM9J8qettZYkVTWTZHeO3R2cwbxNSb6stXZ/VW1O8h1J/niEx/AwCwst+w8dyX2H
53P+1tls37YlMzNGtmByZJI+kXdGRbboGpmlq2QXYGWukUzCyJrDrbWHqupFSW5PclaSm1tr+6rqhiR7W
mu3JvmNJG+oqjuTPJBjDeTjnpbkE621uxbN+5Iktw8aw2flWGP410Z1DEstLLS8fd+ncv0tezN/dCGzm2dy4
+4d2XXlBU5WJkIm6RN5Z1Rki66RWbpKdgFW5hrJpIx0zOHW2m2tta9qrX1la+3lg3kvHTSG01qbb619V2v
tca21qxY3gltr72ytfcOS/R1prX19a+2JrbUrW2s/2lr7wiiPYbH9h46cOEmTZP7oQq6/ZW/2HzoyrhLgJDJJn8
g7oyJbdI3M0lWyC7Ay10gmZaofSDdt7js8f+IkPW7+6EIOPDg/oYroO5mkT+SdUZEtukZm6SrZBViZaySToj
k8hPO3zmZ288lf2ezmmZx3zuyEKqLvZJI+kXdGRbboGpmlq2QXYGWukUyK5vAQtm/bkht37zhxsh4f/2X7
ti0Troy+kkn6RN4ZFdmia2SWrpJdgJW5RjIpI3sg3UY0M1PZdeUFueK6p+bAg/M57xxPjmSyZJI+kXdGRbb
oGpmlq2QXYGWukUyK5vCQZmYql82dncvmzp50KZBEJukXeWdUZIuukVm6SnYBVuYaySQYVgIAAAAAoI
c0hwEAAAAAekhzGAAAAACghzSHAQAAAAB6SHMYAAAAAKCHNIcBAAAAAHpo06QLmJSFhZb9h47kvsP
zOX/rbLZv25KZmZp0WfAwskoXyCldIat0hazSBXIKsL5cV5mEXjaHFxZa3r7vU7n+lr2ZP7qQ2c0zuXH3juy6
8gInHVNFVukCOaUrZJWukFW6QE4B1pfrKpPSy2El9h86cuJkS5L5owu5/pa92X/oyIQrg5PJKl0gp3SFrNIV
skoXyCnA+nJdZVJ62Ry+7/D8iZPtuPmjCznw4PyEKoLlySpdIKd0hazSFbJKF8gpwPpyXWVSRtocrqpdVfXhq
rqzql6yzPIvqao3D5a/r6q2D+Zvr6p/rKq9g+lXF23z9VX1gcE2r6yqoe+tP3/rbGY3n3zos5tnct45s0MfI4ySr
NIFckpXyCpdIat0gZwCrC/XVSZlZM3hqjoryauTfFuSxye5pqoev2S1Fyb5dGvtcUlekeQXFi37aGttx2D6oUX
zX5PkB5JcPph2DVvb9m1bcuPuHSdOuuPjuGzftmXYXcFIySpdIKd0hazSFbJKF8gpwPpyXWVSRvlAuquS3N
lauytJqupNSa5O8qFF61yd5GcGr9+S5FWnuhO4qh6bZGtr7b2D969P8uwkbxumsJmZyq4rL8gV1z01Bx6c
z3nneAIk00lW6QI5pStkla6QVbpATgHWl+sqkzLK5vCFST6x6P3dSZ680jqttYeq6jNJtg2WXVpVf5XkcJL/0F
p712D9u5fs88LlPryqrk1ybZJccsklD1s+M1O5bO7sXDZ39pCHBetntZwmssp0cE2lK2SVLvD7T1e4ptIVa7m
uwqT5/WdaTesD6e5Ncklr7WuTXJ/kd6tq6zA7aK3d1Frb2VrbOTc3N5Ii4UzJKV0hq3SFrNIFckpXyCpdIat0
gZwyrUbZHL4nycWL3l80mLfsOlW1KcmjkhxqrX2+tXYoSVprf5nko0mEwAAAACAVVRrbTQ7Pt
bs/bskT8+xBu4dSb67tbZv0Tr/NskTWms/VFXPS/KdrbXdVTWX5IHW2heq6rIk7xqGOoer/Woe1K//6uZtr+
JelY20X/7j6w5nCRV9e1JfjnJWUlubq29vKpuSLKntXZrVc0meUOSr0JlYXaz4Vx7Px9PE76Nsx
9+14k+4cc1fqTNQ6TtNUv1qWN021DEPd46Xu6TNtx6aelU20lpGOOQwAAAAAwHRy5zAAAAAAQA9pD
gMAAAAA9JDmMAAAAABAD2kOAwAAAAPRQL5rDu3btaklMpnFOQ5
NT04SmocmqaQLTaZFV0wSmocmpaQLTaZFV0wSm0yKrpglMQ5NT0wSmFfWiOXz//fdPugRYlZzSFbJKV
8gqXSCndIWs0hWyShfIKdOkF81hAAAAAABOpjkMAAAAANBDmsMAAAAAD20adIFsHEtLLTsP3Qk9x1
VE8LYAAAgAElEQVSez/lbZ7N925bMzNSky4I1k+GNwd8RJss5SN85BxiWzNAl8grdpznMSCwstLx936dy/S
17M390IbObZ3Lj7h3ZdeUFfijoBBneGPwdYbKcg/Sdc4BhyQxdIq+wMRhWgpHYf+jIiR+IJJk/upDrb9mb/Y
eOTLgyWBsZ3hj8HWGynIP0nXOAYckMXSKvsDFoDjMS9x2eP/EDcdz80YUceHB+QhXBcGR4Y/B3hMlyDt
J3zgGGJTN0ibzCxqA5zEicv3U2s5tPjtfs5pmcd87shCqC4cjwxuDvCJPlHKTvnAMMS2boEnmFjUFzmJHYvm
1Lbty948QPxfGxh7Zv2zLhymBtZHhj8HeEyXIO0nfOAYYlM3SJvMLG4IF0jMTMTGXXlRfkiuuemgMPzue8c
zy1lG6R4Y3B3xEmyzlI3zkHGJbM0CXyChuD5jAjMzNTuWzu7Fw2d/akS4HTIsMbg78jTJZzkL5zDjAsmaFL5
BW6z7ASAAAAAAA9pDkMAAAAANBDmsMAAAAAD2kOQwAAAAA0EOawwAAAAAAPaQ5DAAAAAD
QQ5rDAAAAAAA9pDkMAAAAANBDmsMAAAAAD00tc3hqrq5qg5U1QeXWfbvq6pV1WMmMJ0AAAAAAAAAAAAA
QNdNbXM4yeuS7Fo6s6ouvB7fd0EAAAAABvF1DaHW2t/keSBvJB7fd0EAAAAABvF1DaHW2t/keSBvJB7fd0EAAAAAOOY2ub

wcqrq6iT3tNb+etK1AAAAAAB0WWeaw1X1yCQ/leSla1z/2qraU1V7Dh48ONri4DTJKV0hq3SFrNIFckpXy
CpdIat0gZwyrTrTHE7ylUkuTfLXVbU/yUVJ3l9VFyy3cmvtptbaztbazrm5uTGWCWsnp3SFrNIVskoXyCldIat
0hazSBXLKtNo06QLWqrX2gSTnHX8/aBDvbK3dP7GiAAAAAAA6amrvHK6qNyZ5T5Kvrqq7q+qFk64JAAA
AAGCjmNo7h1tr16yyfPuYSgEAAAAA2HCm9s5hAAAAAABGR3MYAAAAAKCHNIcBAAAAAHpIcxgAAAAA
oIc0hwEAAAAAekhzGAAAAACghzSHAQAAAAB6SHMYAAAAAKCHNIcBAAAAAHpIcxgAAAAAoIc0hwEAA
AAAekhzGAAAAACghzSHAQAAAAB6SHMYAAAAAKCHNIcBAAAAAHpIcxgAAAAAoIc0hwEAAAAAekhzG
AAAAACghzSHAQAAAAB6SHMYAAAAAKCHNIcBAAAAAHpIcxgAAAAAoIc0hwEAAAAAekhzGAAAAACgh
zSHAQAAAAB6SHMYAAAAAKCHNIcBAAAAAHpIcxgAAAAAoIemtjlcVTdX1YGq+uCieb9UVf9fVf1NVf1BV
X3ZJGsEAAAAgPV04cWXpKqmYtr0iNmJ17B4uvDiSyb959lwNk26gFN4XZJXJXn9onnvSPKTrbWHquoXkv
xkkhdPoDYAAAAAWHefvPsTee5r3z3pMpIkb/7Bp0xNLcmxelhfU3vncGvtL5I8sGTeH7XWHhq8fW+Si8Ze
GAAAAADABjC1zeE1+P4kb1tpYVVdW1V7qmrPwYMHx1gWrJ2c0hWySlfIKl0gp3SFrNIVskoXyCnTqpPN4
ar66SQPJfmdldZprd3UWtvZWts5Nzc3vuJgCHJKV8gqXSGrdIGc0hWySlfIKl0gp0yraR5zeFlV9YIk35Hk6a2
1NuFyAAAAAAA6qVPN4araleQnkvyL1trnJl0PAAAAAEBXTe2wElX1xiTvSfLVVXV3Vb0wyauSnJPkHVW1t
6p+daJFAgAAAAB01NTeOdxau2aZ2b8x9kIAAAAAADagqb1zGAAAAACA0Rl7c7iqzq2qJ477cwEAAAAA+
KKxNIer6p1VtbWqHp3k/Ul+rapuHMdnAwAAAADwcOO6c/hRrbXDSb4zyetba09O8i1j+mwAAAAAJYY
V3N4U1U9NsnuJP9jTJ8JAAAAAMAKxtUcviHJ7UnubK3dUVWXJfnImD4bAAAAAIAlNo3jQ1prv5fk9xa9vy
vJvx7HZwMAAAAA8HBjaQ5X1SuXmf2ZJHtaa28dRw0AAAAAHzRuIaVmE2yI8eGkvhIkicmuSjJC6vql8dU
AwAAAAAAA2O5czjHmsHf2Fr7QpJU1WuSvCvJP0/ygTHVAAAAAADAwLjuHD43ydmL3m9J8uhBs/jzY6o
BAAAAAICBcd05/ItJ9lbVO5NUkqcl+c9VtSXJH4+pBgAAAAABsbSHG6t/UZV3ZbkqsGsn2qtfXLw+sfHUQ
MAAAAAAF80rmEljn/WwSSfTvK4qnraGD8bAAAAAIBFxnLncFX9QpLnJtmXZGEwuyX5i3F8PgAAAAAAJxv
XmMPPTvLVrTUPnwMAAAAAmALjGlbiriSbx/RZAAAAAACsYlx3Dn8uyd6q+pMkJ+4ebq1dN6bPBwAAAA
BgkXE1h28dTAAAAAAATIGxNIdba781js8BAAAAAGBtRtocrqpbWmu7q+oDSdrS5a21J47y8wEAAAAAW
N6o7xz+0cF/v2PEnwMAAAAAwBBG2hxurd07+O/HFs+vqpkk1yT52HLbAQAAAAAwWjOj3HlVba2qn6yq
V1XVM+qYH0lyV5Ldo/xsAAAAAAABWNuphJd6Q5NNJ3pPkf0/yU0uaQJ1lM3+w/dOTEBT5J5o8u5Ppb9mb/oSMTrgzWn7
mfyznuSJjUy+mVayyaTIHnTPqIeVWG/nt9buHbz+VJLzJ1lM3+w/dOTEBT5J5o8u5Ppb9mb/oSMTrgzWn7
zTZ/LPepInNjL5ZlrJJpMie9A9XWsOn9Baa0lW/P8mVNW1VbWnqvYcPHhwjJVtXPcdnj9xgT9u/uhCDjzoG
YOnS06nl7yfTFb7pcv5l9Xp0+U8jYqcbhwbPd+y2l0bPZtLyer06Fv2hiGnTKuuNYfvq6rHJsngvwdWWrG1dl
NrbWdrbefc3NzYCtzIzt86m9nNJ0dmdvNMzjtndkIVdZ+cTi95P5ms9kuX8y+r06fLeRoVOd04Nnq+ZbW7
Nno2l5LV6dG37A1DTplWXWsO35rk+YPXz0/y1gnW0jvbt23Jjbt3nLjQHx87aPu2LROuDNafvNNn8s96kic
2MvlmWskmkyJ70D1T+0C6qnpjjj187jFVdXeSlyX5+SS3VNULk3wsye7JVdg/MzOVXVdekCuue2oOPDif8
86ZzfZtWwwqz4Yk7/SZ/LOe5ImNTL6ZVrLJpMgedM/UNodba9essOjpYy2Ek8zMVC6bOzuXzZ096VJg5O
SdPpN/1pM8sZHJN9NKNpkU2YNu6dqwEgAAAAAArAPNYQAAAACAHtIcBgAAAADoIc1hAAAAAIAe0hw
GAAAAAOghzWEAAAAAgB7SHAYAAAAAGNKFF1+SqpqK6cKLLzmtY9i0zt8JAAAAAMCG98m7P5Hnvvbd
ky4jSfLmH3zKaW3nzmEAAAAAgB7SHAYAAAA6CHDSsCQFhZa9h86kvsOz+f8rbPZvm1LZmZq0mXBSeS
UrpBVukJW6QI5pStkla6QVfpAcxiGsLDQ8vZ9n8r1t+zN/NGFzG6eyY27d2TXlRf4gWBqyCldIat0hazSBXJK
V8gqXSGr9IVhJWAI+w8dOfHDkCTzRxdy/S17s//QkQlXBl8kp3SFrNIVskoXyCldIat0hazSF5rDMIT7Ds+f+G
E4bv7oQg48OD+hiuDh5JSukFW6QlbpAjmlK2SVrpBV+kJzGIZw/tbZzG4++bSZ3TyT886ZnVBF8HBySlfIKl0
hq3SBnNIVskpXyCp9oTkMQ9i+bUtu3L3jxA/E8TGHtm/bMuHK4IvklK6QVbpCVukCOaUrZJWukFX6wgPp
YAgzM5VdV16QK657ag48OJ/zzvG0UqaPnNIVskpXyCpdIKd0hazSFbJKX2gOw5BmZiqXzZ2dy+bOnnQps
Cl5pStkla6QVbpATukKWaUrZJU+MKwEAAAAAEAPaQ4DAAAAAPSQ5jAAAAAAAQA9pDgMAAAAA9JDm
MAAAAABAD2kOAwAAAAD0kOYwAAAAAEAPaQ4DAAAAAPSQ5jAAAAAAAQA9pDgMAAAAA9FAnm8NV
9X9W1b6q+mBVvbGqqZiddEwAAAABAl3SuOVxVFya5LsnO1trXJDkryTzkryfMmMmwXUAAAAAQLd0rjk8sCnJl1bV
piSPnXwJfkNw8yb1JPtNa6OJ4Y8n+YaqemRVVZnJl/nbC
dcEAAAAANApnWsOt9bel+QtSd6AM5dgw3TbQoAAAAAICO2TTpAk5Ha+1lSV426TOAAAAAALqqc3c
OAwAAABw5jSHAQAAAB6SHMYAAAAKCHNIcBAAAAAHpIcxgAAAAAoIc0hwEAAAAAekhzGAAAAAA
CghzSHAQAAAB6SHMYAAAAKCHNIcBAAAAAHpIcxgAAAAAoIc0hwEAAAAAekhzGAAAAAA
CghzSHAQAAAB6SHMYAAAAKCHNIcBAAAAAHpIcxgAAAAAoIc0hwEAAAAAekhzGAAAAAA
VsucTDINxpVDeedMrZQh2WLa+P2nC04nh7LLJPj3P8DKetkcXlhoefu+T+X6W/Zm/uhCZjfP5MbdO7Lrygt
OeaE/3e3gdK2WOZlkGowrh/LOmVopQ8/4Z+fnj/72Ptliavj9pwtOJ4eyyyT49z/AqfVyWIn9h46cuMAnyfz
RhVx/y97sP3RkJNvB6VotczLJNBhXDuWdM7VShvbd+xnZYqr4/acLTieHsssk+Pc/wKn1sjl83+H5Exf44+aP
LuTAg/Mj2Q5O12qZk0mmwbhyKO+cqZUydO9nZIvp4vefLjidHMouk+Df/wCn1svm8PlbZzO7+eRDn908
k/POmR3JdnC6VsucTDINxpVDeedMrZShxz5Ktpgufv/pgtPJoewyCf79D3BqvWwOb9+2JTfu3nHiQn987K

Dt27aMZDs4XatlTiaZBuPKobxzplbK0JWPfZRsMVX8/tMFp5ND2WUS/Psf4NSqtTbpGkZu586dbc+ePSfN
O/7U0QMPzue8c4Z/Wumw29E7Q4diuZwmq2dOJjlD65LVceVQ3nvrtP7Iw2RVtlgnfv/pgpFfU09FdhnCR
LN6JtvRO+v2+39ih1V57mvffUZFrZc3/+BTpqaW5Fg909TLnLa/1Sm+mxVzumk05Uy/mZnKZXNn57K5s8e
yHZyu1TInk0yDceVQ3jlTK2VItpg2fv/pgtPJoewyCf79D7CyXg4rAQAAAADQd5rDAAAAAAA91Isxh6vqYJK
PrfNuH5Pk/nXe55lQz8omUcv9rbVdw2ywJKfT9P2tRZfqVevJzjSrS3Xp+10LxzMdhs5psmJWu/odnIm+Hf
Mkj3e9r6lr1ZW/cVfqTDZ2ret5TV0P0/Rdq2V5k6rlTLM6Td/hMNQ9XutR96R+/1czbX8T9axsov/270VzeB
Sqak9rbeek6zhOPSubplrWqms1d6letY5WF2s+Fcez8fTxO+jbMffteJPuHHNX6kzUOk7TVL9aljdNtQxD3e
Ol7ukzbcemnpVNuhbDSgAAAAAA9JDmMAAAAAABAD2kOn76bJl3AEupZ2TTVslZdq7lL9ap1tLpY86k4no
2nj99B3465b8f7/7d35tFyVNUe/n4kTGEeAo85gAFfwhBIQAwEQRFwYHqAoKBEeAwOIIoPgRB9KGAIAiI
ymJQMUBAEOTJEgYwhDILFMGZZRJAjZgQC+/1xdid1O9339d3t9v9rvbqnFNVu07tsufsaB97rld5IS
QtZm0kvwhS2VaSZbeEHI3l5C79Wi1ewt5qlOoLLHmcBAEQRAEQRAEQRAEQRAEQQcSI4eDIAiCIAiCIAiCI
AiCIAg6kGgcroCkXSU9JulJJScdXiD9C0jRJkyXdLWmlhw/HT5Z0YTPkyaTbW5JJGpEJ+74fai8fYqSpai8
kTRa0ouZ6/53Ju4SUGpZ6/53Ju4gSU/476BGYNMgmY+RNFPSVEm3S1ovE/dBOuQuxR37tdrD3eSDp
215ep0saI2mpJl//YkkvSJqeCVtZ0q2ep7dKWqlAWc6Q9Kg/+2slrdgMWarJk4k7Vsl8ZL/IB+w
CxgA2AJYAowpCzN8pnt3YGbfHsQML3Z8ni65YDxwERghIcN8fRLAuv7efoVJEsheQOMBs6rcOzKwGz/X8
m3V2oR/doRGODbXwOuzMS9mbeMvZS1WlloqO7lLGvDdbMR8nq63Mt1g/P468CFvr1/SXeBLwFX+PYA
YC4wqJl53sf7GQRsBvwO2CcTXoj9yPFXyP+aawc+/awHHPAikXXeT5Pyo6qtbcdfPXalHX81PuPBwCOl8gmsVrT
cOdxjXt7zl6abVy2xOtVK5rpaBK1Urbzbrzk/j05dWAF4mrTl8k8k5m9b2la9z0k56tl6snHop
/a14BVSA75W6QRJv8AzjSzSi/DZlJPPPhb1DLqjITJJ2po0smJWg+QsmsnJTJWg+QqinptbTtS7zu63ajlGW8EbCTpHn9vtlulr
p3sVL3Xazn/JkPWPjQzX9vJZyxRj68Alf2xtfw83Z0zD1lK7AeMKQu7xKfHn1OmRKv7CT7zOd
bakJXt7zl6Sh641g3ay6428dhH2CNrH3jccM3sGOJNU93oOeM3MbilWKGBWN7PnfPt5YPUihclwMAXXB
STtATxjZlOKuH7/Ii66KGBm5wPnS/oS8APgIFhW9fMXpY0HLhO0tCdmp43zg
3AGDN7V9LhpN6pT+Z8pt+pKsvD0UrluEFsDH5C
mIK4ETJB0m5nNLlasIIuPQvo9cJCZtdKoj1ypYmsXORZBu1IL/UlLS5+xAGg0yXtKmZzZvQVIFWg5/wbaxz60i
8/YAxX9sSIFkvQx4G0zy64JeYDn63LANcSXaN2O4Yq/sL3SQ09SwC/Ab4H/KgYCXuk5Xz/DqDl7VG72Pta
UVrLdw/SMoSvAmMlHWhwfmfyhWsgWYmUkqcjYvAJJOAOYBlxcoweDgf0hLXRXRRRCjBxemGdI63yUWNvDq
nEFPhTe0jTvl317EqkndaOc5VkO2AQYJ2kuad2p65e1Mk85Zm2rmX4auLZp0ZG1bZMMaXyWtBQg5O4GAxLHps
CcDuGflLPYB4o9o4YIuiZc0wvyz04dh6abVy2xOtVK5rpZBrzk/j05dWAF4mrTl8k8k5m9b2la9z0k56tI6snHop
5Bd9Qlk6TlgRuBE8xsYoNlKNrmjTjz1D16m+teZ5PX5Lif0pGzWcydc3gD9S29JeeZTlPPOlKtX8BTN7zhLvApeQ/5JneehaM2gnu96
MJfrsK3Tjjz1D16m+teZ5PX5Lif0pGzWcydc3gD9S29JeeZTlPPOlKtX8BTN7zhLvApeQ/5JneehaM2gnu96
waxdkj6B97H0e7ATMMbMXzex94E/AyIJlAvindzCVOpoKXfJL0mjg86SOvyNeRPcT99beBhSf/RNA
msiQsct8OPNMpktj+Y0qLlQ8vSDM5s7wY85NsD8Q9DkRY9fwZYOW95ytKPY8GHq4bS9cNVs6nvg3T1yF
Jl3gBrZLb3Aib69sqkBdpX8t+ceuVpoMxbkJyUwWXhKwFL+vaqwBNU+NhQi5SFhupezrl2XDcbIW9Z+tzK
dYPz+Bt0/fDHVb79PeAS314GmAlrfMjXoGlH1kpSj7keP9LAHcDhxd5D00Oz+q2dp2/dVjV9rxV+Mz3hW
4zLdXJU0PXaVo2fN4pkXbqTplbUX/ppov1rR8rVPOpuZpL2Wu5itU9cdY+MNrn81TFt9fzGXYoOycq/r24q
Rls47IuXxU1bm88qUbWar6C3idy2X5BfDTdtS1VigjfdGFFpe7EHvuCz0p3N7ndO8fA2aQ1hoWaQb1kQXI
MYiuH4E7g64fpDu9QFl2JdVLBxb0jLrIUxY3lyZ/kK7pGdAOP+CzpNEls0i9Gd2eGZNIBBvNWsX3jFdvwb6nt3Q+wZc7ywlZlmWvWPfPLxZaz0DJfLB3...

4PyXStqnj8eeLOk79cqQOV+PvoikQZKmV4kbLWnNRskT9A1Jd0rapSzsaEm/qsVGtTKS7q0hTcWy6bZ3Z
D6SBY2mUbY3+86txW/tpYxrSrq6hnQV2wmibhZAlzaC6ZJukLSih9ekX0FjiMbhoB6OBqICF/SGd8xsmJkN
BT4NfAb4IYCZPWRmR+V8/T2BXjkgkvrnJEvQIZjZ9Wb20zpOEba2c7gHGAngHWerAkMz8SOBHhsGiiT0fd
FC0seBzwNbmtlmwE7AU8VKlR8N8EVGA9E4XDxjgP3LwvYHxjTARlWlGT6jmdXTuLsD/o4JWpt2sb1m9q
yZ9alzz+l13SxYJCm1EWwCvAJ8AxqiX0EviMbhDkPShpJukjRJ0gRJH/XwSyWdK+leSbNLIzgkLSbpAkmPSrp
V0v9J2kfSUSTn905Jd2bO/xMfETpR0urF3GXQDpjZC8BhwDeVyPZqby3pPkmPuE5u7OGjJV3nujhX0jd9F
N0jrnMre7qF9NxHSuwOnOE9kxv2UB4ulHQ/cHohGRS0HZIGSrpG0oP+29bD54/ScJ2bKGmapB+XjaRYVt
LVbm8v93JR0dYGiyz3Ah/37aHAdOANSStJWhL4T+Bhj19IXwAkfcpt4jRJF/txXZC0s9vYhyWNlbRsWfxqkib
59uaSTNK6vj9L0oDQ945hDeAlM3sXwMxeMrNnM/FHuh5Ny7xDu4zmVRoJNMi3v6I0Cm6KpN+XX0zSq
f4O7ifpONetqZJOyaQ5QdLjku4GNq5wjn6S5rhOrag0Iml7jxsvabCkZbx8PODlZQ+Pz/oiA5X8jRmSLpL0dy
0YrddP0m897hZJSyv5ziOAy93PWLrv2R7UydXA5yQtAWm0N8m2TCizUfu6fk6RNLdpLmEAAArcSURBVN
7D+kk608OnSjrSw4dLukvJZ7xZ0hoePk7SLyQ9BHxL0m6S7ne9uk0V6kOSbpS0mW8/lukk3/6RpEN9u5r+
v+n/Fetomct0KZueB0cA33b9HNWw3A7yoC+2t6JdqwU/z4puN1+W9BUP/52kT3u5OCOjk4d7/PyZFEq+
wVWSZkq61svBiMw1urQTqELdrN5MCxYJ7gPWgoX0a7SkPynV3Z+QNL+OLukQJb/gAX83V7XxQXWicbjz
+A1wpJkNB74DXJCJWwPYjtRLWepR/y9gEKlH78t4pdXMzgWeBXY0sx097TLARDPbHBgPHJrrnQRtj5nNB
voBq5VFPQqMMrMtgJOA/83EbULSy62AnwBve7r7gK94moX03MzuBa4HjvOeyVmV0mWuszYw0syOad
gNB4sCS7sDO1nSZOBHmbhzgLPNbCtgb+CiCsefA5xjZpsCT5fFbUEaNTkE2ADYtoqtDRZRvOI3T6khdiTJrt1
PeveOAKaZ2XuefCF9kbQUcCmwn+tYf+Br2Wt449YPgJ3MbEvgIaCLnfPOu6UkLQ+M8jSjJK0HvGBmbxP6
3incAqzjla4LJH2iLP4l16Nfkd6jVZE0lKR7n3Rf8Vtl8WcAA4GvAp8CBgNbA8OA4ZK2lzScNAJ0GPBZki/QBT
P7AHiMpFvbkTpURil1lKxjZk8AJwB3mNnWwI6kxollyk71Q08zlNTYuG4mbjBwvse9CuxtZleTysoB7me80
11+BPlhZq8AD5BmqEHSmavMzMqSngTs4vq4u4cdRqr7DPMRm5dLWhz4JbCP+4wXk3zQEkuY2Qgz+zl
wN7CN+6ZXAN+tIOIEkk6uAMwDtvXwUcB4STtTQf/LzlGxjpahS9k0s7nAhSS7PczMJlSQK2gd+mJ7a7Fr1b
iHpIdDgdkkXYSkV/cChwCv+Tt/K+BQSeuXnePrwL/MbAhwIjA8E7dQO0GVulnQwUjqR3r/X18lyTBgP2BT
YD9J6ygt5XQisA1Jhz+aSV/JxgdViOnSHYTSyKCRwFilAUYA2RFF15nZh8DMTC/3dsBYD39e3Y/keQ8orSE4i
bRsQBD0hRWAyyQNBgxYPBN3p5m9QRpN9xpwg4dPAzarQc+BmsrDWK9gBkGWd8xsWGlH0mhSox2k
KX9DMvq0vMpGZJKc7D19+4/AmZm4B8zsaT/vZFKl7+5GCh+0BfeSbNNI4CzS6ImRwGukyluJSvryBjDHzB
73NJeRpub9InPcNqTGhHtcV5cgNUJXkmNbYHtSB92ugEiNGhD63hGY2ZveIDuK1NhwpaTjzexST/ln/59E
aqzqjk+S3q0v+blfycSdCNxvZodBGt0O7Aw84vHLkhrLlgOu9Q4KJFWrQE4g6e76wGmkAQt3AQ96/M7A7
lowwnkpujb+QvKB93JZb5L0r0zcHDObnLn3QT3ce9B8SktL/Nn/D6mQ5h7gUklXsUCXdwIuNLN5kPRU0ia
kwQm3us3rBzyXOc+Vme21SeVkDZJ9nVPhuhOAozzuRuDTSmutr29mjymNHq6k/9mRbz3V0XpTNoMW
o4+2txa7Vo2Szfw7qcH5MElrkRp733KbvFlmdPoKJJ18PHOO7UidwpjZdElTM3HRThB0x9LuC64F/A24tU
q6283sNQBJM4H1SEuw3VXyKSSNBTby9JVsfFCFaBzuLBYDXs02bJTxbmZbVdJ0x/uZHvkPCP0KekDSBiRd
eYE0XbrEqaRG4L2UpsGNy8Rl9fTDzP6HJJ3rSc9L9JTurRpuIQiyLEYaLfTvbGCm8awnsrodNrRzKa07vClpW
YmngGOB14FLMun6qi8CbjWzL/aQbjypUroeqXHle6TOuhs9PvS9Q/CO0nHAOEnTgINII9RhwXPMPsN5dJ
2duFQNl3mQNDpyZa/gCTjNzH6dTaTMBxt7YDxp1PyapJFDx5HWWy11bog02vexsvPXuiRauf7GEhKtx5+
BsyVtCQwws0nlCczsCKWPfH0OmOSNcZUQMMPMykfnlsj6jL8EzjKz6yXtAJxcIf2DpI7l2aRGkFVJHRglGSv
qfy+pVDaDNqIPtrceuzae1Jm8LmkE8l7APnS1mUea2c1l5x5U4+1EO0HQHe+Y2TDvJLuZpIuVPg7bK9+xko
03s5cbJfSiRiwr0UGY2evAHEn7AiixeQ+H3QPsrbSu1eokx7rEG6QRHEHQayQNJE1vO6/CNL8VgGd8e3Rvz
tuDns/X2T6WhyDojluAI0s7kip1PEwkTcGHhT+WU42wtZ3FvaTlnV4xsw+8oWxFFkzt7I7HgEGSPuL7XyaN
lswykbQExUdg/hqFG7EwE4ADgSd8ZNorpGn8pdG9oe8dgKSNfRZPiWGkkWXdMRfY0o/fkjR6F+AOYF9Jq
3jcypljbiItaXajpOVIlcODS6PRJa0laTVSA8aeSmv8LgfsVkWGB0idLB96B8Zk4HAWjLy8mbRmZ2mt7i0qnO
Me4AsevzOwUg/3DaG/LYOZvQncSVoCYkylNJI2NLP7zewk4EVgHVJj7eHyj8u5nj4GDFT6SBiSFvdlUiqR9
WEPqiLbe6SOv31JMzcmkJYGyOpnJf3P0l0drRqhn21CH21vLXatImb2FKmTYrAv+3c3C+vk15SWWEHSRh
WWrMjazCGkTu6eCJ0M5uOzgo4CjlXtH/h8EPiE0vc5+rPA76xm44MqROPwos0ASU9nfscABwCHSJoCzA
B6Wqj+GtI6gTOBP5DWbXvN434D3FRhGlMQVKO0XusM4DZS48IpFdKdDpwm6RH61rNcTc+vAI5T+kjDh
t2kC4K+cBQwQulDHTNJH34p52jgGJ9q9xEW2NPuCFvbWUwjVdAmloW9VpqOXw1vBPsqabmcaaQZFR
eWpXmR1Ok2xvXwPrquz1ZKN5c0UqhUMbybNNuiNLU+9L0zWJa0zNNMf45DqDwSMss1wMr+rv8mPu
3YzGaQ1mm9y9+7Z2UPMrOxwG9Jaw1OlC1Fcp/r8tXAcmb2MGkK/xTgryxYJoKyc71LanwrlaMJpAaIab5
/KmnJqqku56kVTnMKsLPSx3D2BZ4nNWR0x6XAhYoP0rUKY4DNqdI4TFqTdZo/43tJenUR8A+SbkwBvuS
NufsAP/OwyaTOh0qcTLLBk4DubPYE0hru7/j22v6Pmd1CBf0vO767Olo1bgD2UnyQrh3oi+2txa51x/0sW
CZiAmmKf6lD+CKSrj3s5eXXLFxHu4DUiTIT+DGpbtWTTpbXzYIOx8weAaYCPc1wK6V/hrT82QOkDoq5LNC
7SjY+qIIWHrAXBF2RtKyve7QKqdBta2bPFy1XEARBu+HTpd4xM5O0P/BFM4tOiWCRJPQ9aGeUPmD3gZn
N8xGjv6phyaogaBpRRwtaCaWPiS1uZv/2ht7bgI1twYd0gyAXMrawP3AtcLGZXVu0XO1GrPUS1MJfJK1I+q
jCqeF0BEEQ9JnhwHk+5e9V4OCC5QmCPAl9D9qZdYGrJC1G+pjSoQXLEwTlRB0taCUGAHf60hMCvh4Nw
0GTOFnSTqRvHNwCXFewPG1JjBwOgiAIgiAIgiAIgiDoQGLN4SAIgiAIgiAIgiAIgiAIgg4kGoeDIAiCIAiCIAi
ClAiClAg6kGgcDoIgCIIgCIIgCIIg6ECicTgIgiAIgiAIgiAIgqADicbhIAiCIAiClAiClAiCDiQah4MgCIIg
CIIgCIIgCDqQ/wcljTqzLpdtJgAAAABJRU5ErkJggg==\n"

```
    },
    "metadata": {
     "needs_background": "light"
    }
   }
  ]
 },
 {
  "cell_type": "markdown",
  "source": [
   "3.Perform Descriptive Statistics on the dataset"
  ],
  "metadata": {
   "id": "vxI6QDtLLGHP"
  }
 },
 {
  "cell_type": "code",
  "source": [
   "data.head()"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/",
    "height": 206
   },
   "id": "VAI1_H3sLCJq",
   "outputId": "fc00aab4-1d3d-4f6d-cc12-7e3abb4d1b62"
  },
  "execution_count": 20,
  "outputs": [
   {
    "output_type": "execute_result",
    "data": {
     "text/plain": [
      "  Sex  Length  Diameter  Height  Whole weight  Shucked weight  Viscera weight  \\\n",
      "0   M   0.455     0.365   0.095        0.5140          0.2245          0.1010   \n",
      "1   M   0.350     0.265   0.090        0.2255          0.0995          0.0485   \n",
      "2   F   0.530     0.420   0.135        0.6770          0.2565          0.1415   \n",
      "3   M   0.440     0.365   0.125        0.5160          0.2155          0.1140   \n",
      "4   I   0.330     0.255   0.080        0.2050          0.0895          0.0395   \n",
      "\n",
      "    Shell weight  Rings  \n",
      "0          0.150     15  \n",
      "1          0.070      7  \n",
      "2          0.210      9  \n",
      "3          0.155     10  \n",
      "4          0.055      7  "
     ],
     "text/html": [
      "\n",
      "  <div id=\"df-707df05b-8296-4296-bfa1-9f8c7c44808b\">\n",
      "    <div class=\"colab-df-container\">\n",
      "      <div>\n",
      "<style scoped>\n",
      "    .dataframe tbody tr th:only-of-type {\n",
      "        vertical-align: middle;\n",
```

```
"    }\n",
"\n",
"    .dataframe tbody tr th {\n",
"        vertical-align: top;\n",
"    }\n",
"\n",
"    .dataframe thead th {\n",
"        text-align: right;\n",
"    }\n",
"</style>\n",
"<table border=\"1\" class=\"dataframe\">\n",
"  <thead>\n",
"    <tr style=\"text-align: right;\">\n",
"      <th></th>\n",
"      <th>Sex</th>\n",
"      <th>Length</th>\n",
"      <th>Diameter</th>\n",
"      <th>Height</th>\n",
"      <th>Whole weight</th>\n",
"      <th>Shucked weight</th>\n",
"      <th>Viscera weight</th>\n",
"      <th>Shell weight</th>\n",
"      <th>Rings</th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>0</th>\n",
"      <td>M</td>\n",
"      <td>0.455</td>\n",
"      <td>0.365</td>\n",
"      <td>0.095</td>\n",
"      <td>0.5140</td>\n",
"      <td>0.2245</td>\n",
"      <td>0.1010</td>\n",
"      <td>0.150</td>\n",
"      <td>15</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>1</th>\n",
"      <td>M</td>\n",
"      <td>0.350</td>\n",
"      <td>0.265</td>\n",
"      <td>0.090</td>\n",
"      <td>0.2255</td>\n",
"      <td>0.0995</td>\n",
"      <td>0.0485</td>\n",
"      <td>0.070</td>\n",
"      <td>7</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>2</th>\n",
"      <td>F</td>\n",
"      <td>0.530</td>\n",
"      <td>0.420</td>\n",
"      <td>0.135</td>\n",
"      <td>0.6770</td>\n",
```

```
"     <td>0.2565</td>\n",
"     <td>0.1415</td>\n",
"     <td>0.210</td>\n",
"     <td>9</td>\n",
"    </tr>\n",
"    <tr>\n",
"     <th>3</th>\n",
"     <td>M</td>\n",
"     <td>0.440</td>\n",
"     <td>0.365</td>\n",
"     <td>0.125</td>\n",
"     <td>0.5160</td>\n",
"     <td>0.2155</td>\n",
"     <td>0.1140</td>\n",
"     <td>0.155</td>\n",
"     <td>10</td>\n",
"    </tr>\n",
"    <tr>\n",
"     <th>4</th>\n",
"     <td>I</td>\n",
"     <td>0.330</td>\n",
"     <td>0.255</td>\n",
"     <td>0.080</td>\n",
"     <td>0.2050</td>\n",
"     <td>0.0895</td>\n",
"     <td>0.0395</td>\n",
"     <td>0.055</td>\n",
"     <td>7</td>\n",
"    </tr>\n",
"  </tbody>\n",
"</table>\n",
"</div>\n",
"     <button class=\"colab-df-convert\" onclick=\"convertToInteractive('df-707df05b-8296-
4296-bfa1-9f8c7c44808b')\"\n",
"             title=\"Convert this dataframe to an interactive table.\"\n",
"             style=\"display:none;\">\n",
"       \n",
"  <svg xmlns=\"http://www.w3.org/2000/svg\" height=\"24px\"viewBox=\"0 0 24 24\"\n",
"      width=\"24px\">\n",
"    <path d=\"M0 0h24v24H0V0z\" fill=\"none\"/>\n",
"    <path d=\"M18.56 5.44l.94 2.06.94-2.06 2.06-.94-2.06-.94-.94-2.06-.94 2.06-2.06.94zm-11
1L8.5 8.5l.94-2.06 2.06-.94-2.06-.94L8.5 2.5l-.94 2.06-2.06.94zm10 10l.94 2.06.94-2.06 2.06-.94-2.06-
.94-.94-2.06-.94 2.06-2.06.94z\"/><path d=\"M17.41 7.96l-1.37-1.37c-.4-.4-.92-.59-1.43-.59-.52 0-
1.04.2-1.43.59L10.3 9.45l-7.72 7.72c-.78.78-.78 2.05 0 2.83L4 21.41c.39.39.9.59 1.41.59.51 0 1.02-.2
1.41-.59l7.78-7.78 2.81-2.81c.8-.78.8-2.07 0-2.86zM5.41 20L4 18.59l7.72-7.72 1.47 1.35L5.41
20z\"/>\n",
"  </svg>\n",
"     </button>\n",
"     \n",
"  <style>\n",
"    .colab-df-container {\n",
"      display:flex;\n",
"      flex-wrap:wrap;\n",
"      gap: 12px;\n",
"    }\n",
"\n",
"    .colab-df-convert {\n",
```

```
"     background-color: #E8F0FE;\n",
"     border: none;\n",
"     border-radius: 50%;\n",
"     cursor: pointer;\n",
"     display: none;\n",
"     fill: #1967D2;\n",
"     height: 32px;\n",
"     padding: 0 0 0 0;\n",
"     width: 32px;\n",
"   }\n",
"\n",
"   .colab-df-convert:hover {\n",
"     background-color: #E2EBFA;\n",
"     box-shadow: 0px 1px 2px rgba(60, 64, 67, 0.3), 0px 1px 3px 1px rgba(60, 64, 67, 0.15);\n",
"     fill: #174EA6;\n",
"   }\n",
"\n",
"   [theme=dark] .colab-df-convert {\n",
"     background-color: #3B4455;\n",
"     fill: #D2E3FC;\n",
"   }\n",
"\n",
"   [theme=dark] .colab-df-convert:hover {\n",
"     background-color: #434B5C;\n",
"     box-shadow: 0px 1px 3px 1px rgba(0, 0, 0, 0.15);\n",
"     filter: drop-shadow(0px 1px 2px rgba(0, 0, 0, 0.3));\n",
"     fill: #FFFFFF;\n",
"   }\n",
"  </style>\n",
"\n",
"     <script>\n",
"       const buttonEl =\n",
"         document.querySelector('#df-707df05b-8296-4296-bfa1-9f8c7c44808b button.colab-
df-convert');\n",
"       buttonEl.style.display =\n",
"         google.colab.kernel.accessAllowed ? 'block' : 'none';\n",
"\n",
"       async function convertToInteractive(key) {\n",
"         const element = document.querySelector('#df-707df05b-8296-4296-bfa1-
9f8c7c44808b');\n",
"         const dataTable =\n",
"           await google.colab.kernel.invokeFunction('convertToInteractive',\n",
"                                                    [key], {});\n",
"         if (!dataTable) return;\n",
"\n",
"         const docLinkHtml = 'Like what you see? Visit the ' +\n",
"           '<a target=\"_blank\"
href=https://colab.research.google.com/notebooks/data_table.ipynb>data table notebook</a>'\n",
"           + ' to learn more about interactive tables.';\n",
"         element.innerHTML = '';\n",
"         dataTable['output_type'] = 'display_data';\n",
"         await google.colab.output.renderOutput(dataTable, element);\n",
"         const docLink = document.createElement('div');\n",
"         docLink.innerHTML = docLinkHtml;\n",
"         element.appendChild(docLink);\n",
"       }\n",
"     </script>\n",
```

```
        "    </div>\n",
        "  </div>\n",
        "  "
       ]
      },
      "metadata": {},
      "execution_count": 20
    }
  ]
 },
 {
  "cell_type": "code",
  "source": [
   "data.tail()"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/",
    "height": 206
   },
   "id": "K_MBRT29LLvE",
   "outputId": "2549809a-98d7-42f9-ab7d-7582a66aa13a"
  },
  "execution_count": 21,
  "outputs": [
   {
    "output_type": "execute_result",
    "data": {
     "text/plain": [
      "     Sex  Length  Diameter  Height  Whole weight  Shucked weight  \\\n",
      "4172   F   0.565     0.450   0.165        0.8870          0.3700   \n",
      "4173   M   0.590     0.440   0.135        0.9660          0.4390   \n",
      "4174   M   0.600     0.475   0.205        1.1760          0.5255   \n",
      "4175   F   0.625     0.485   0.150        1.0945          0.5310   \n",
      "4176   M   0.710     0.555   0.195        1.9485          0.9455   \n",
      "\n",
      "      Viscera weight  Shell weight  Rings  \n",
      "4172          0.2390        0.2490     11  \n",
      "4173          0.2145        0.2605     10  \n",
      "4174          0.2875        0.3080      9  \n",
      "4175          0.2610        0.2960     10  \n",
      "4176          0.3765        0.4950     12  "
     ],
     "text/html": [
      "\n",
      "  <div id=\"df-92442b02-b2cc-44cd-8b50-b94d07c2b274\">\n",
      "    <div class=\"colab-df-container\">\n",
      "      <div>\n",
      "<style scoped>\n",
      "    .dataframe tbody tr th:only-of-type {\n",
      "        vertical-align: middle;\n",
      "    }\n",
      "\n",
      "    .dataframe tbody tr th {\n",
      "        vertical-align: top;\n",
      "    }\n",
      "\n",
```

```
"    .dataframe thead th {\n",
"        text-align: right;\n",
"    }\n",
"</style>\n",
"<table border=\"1\" class=\"dataframe\">\n",
"  <thead>\n",
"    <tr style=\"text-align: right;\">\n",
"      <th></th>\n",
"      <th>Sex</th>\n",
"      <th>Length</th>\n",
"      <th>Diameter</th>\n",
"      <th>Height</th>\n",
"      <th>Whole weight</th>\n",
"      <th>Shucked weight</th>\n",
"      <th>Viscera weight</th>\n",
"      <th>Shell weight</th>\n",
"      <th>Rings</th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>4172</th>\n",
"      <td>F</td>\n",
"      <td>0.565</td>\n",
"      <td>0.450</td>\n",
"      <td>0.165</td>\n",
"      <td>0.8870</td>\n",
"      <td>0.3700</td>\n",
"      <td>0.2390</td>\n",
"      <td>0.2490</td>\n",
"      <td>11</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>4173</th>\n",
"      <td>M</td>\n",
"      <td>0.590</td>\n",
"      <td>0.440</td>\n",
"      <td>0.135</td>\n",
"      <td>0.9660</td>\n",
"      <td>0.4390</td>\n",
"      <td>0.2145</td>\n",
"      <td>0.2605</td>\n",
"      <td>10</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>4174</th>\n",
"      <td>M</td>\n",
"      <td>0.600</td>\n",
"      <td>0.475</td>\n",
"      <td>0.205</td>\n",
"      <td>1.1760</td>\n",
"      <td>0.5255</td>\n",
"      <td>0.2875</td>\n",
"      <td>0.3080</td>\n",
"      <td>9</td>\n",
"    </tr>\n",
"    <tr>\n",
```

```
"    <th>4175</th>\n",
"    <td>F</td>\n",
"    <td>0.625</td>\n",
"    <td>0.485</td>\n",
"    <td>0.150</td>\n",
"    <td>1.0945</td>\n",
"    <td>0.5310</td>\n",
"    <td>0.2610</td>\n",
"    <td>0.2960</td>\n",
"    <td>10</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>4176</th>\n",
"    <td>M</td>\n",
"    <td>0.710</td>\n",
"    <td>0.555</td>\n",
"    <td>0.195</td>\n",
"    <td>1.9485</td>\n",
"    <td>0.9455</td>\n",
"    <td>0.3765</td>\n",
"    <td>0.4950</td>\n",
"    <td>12</td>\n",
"   </tr>\n",
"  </tbody>\n",
"</table>\n",
"</div>\n",
"    <button class=\"colab-df-convert\" onclick=\"convertToInteractive('df-92442b02-b2cc-
44cd-8b50-b94d07c2b274')\"\n",
"            title=\"Convert this dataframe to an interactive table.\"\n",
"            style=\"display:none;\">\n",
"      \n",
"  <svg xmlns=\"http://www.w3.org/2000/svg\" height=\"24px\"viewBox=\"0 0 24 24\"\n",
"      width=\"24px\">\n",
"    <path d=\"M0 0h24v24H0V0z\" fill=\"none\"/>\n",
"    <path d=\"M18.56 5.44l.94 2.06.94-2.06 2.06-.94-2.06-.94-.94-2.06-.94 2.06-2.06.94zm-11
1L8.5 8.5l.94-2.06 2.06-.94-2.06-.94L8.5 2.5l-.94 2.06-2.06.94zm10 10l.94 2.06.94-2.06 2.06-.94-2.06-
.94-.94-2.06-.94 2.06-2.06.94z\"/><path d=\"M17.41 7.96l-1.37-1.37c-.4-.4-.92-.59-1.43-.59-.52 0-
1.04.2-1.43.59L10.3 9.45l-7.72 7.72c-.78.78-.78 2.05 0 2.83L4 21.41c.39.39.9.59 1.41.59.51 0 1.02-.2
1.41-.59l7.78-7.78 2.81-2.81c.8-.78.8-2.07 0-2.86zM5.41 20L4 18.59l7.72-7.72 1.47 1.35L5.41
20z\"/>\n",
"  </svg>\n",
"    </button>\n",
"    \n",
"  <style>\n",
"    .colab-df-container {\n",
"     display:flex;\n",
"     flex-wrap:wrap;\n",
"     gap: 12px;\n",
"    }\n",
"\n",
"    .colab-df-convert {\n",
"     background-color: #E8F0FE;\n",
"     border: none;\n",
"     border-radius: 50%;\n",
"     cursor: pointer;\n",
"     display: none;\n",
"     fill: #1967D2;\n",
```

```
      "     height: 32px;\n",
      "     padding: 0 0 0 0;\n",
      "     width: 32px;\n",
      "   }\n",
      "\n",
      "   .colab-df-convert:hover {\n",
      "     background-color: #E2EBFA;\n",
      "     box-shadow: 0px 1px 2px rgba(60, 64, 67, 0.3), 0px 1px 3px 1px rgba(60, 64, 67, 0.15);\n",
      "     fill: #174EA6;\n",
      "   }\n",
      "\n",
      "   [theme=dark] .colab-df-convert {\n",
      "     background-color: #3B4455;\n",
      "     fill: #D2E3FC;\n",
      "   }\n",
      "\n",
      "   [theme=dark] .colab-df-convert:hover {\n",
      "     background-color: #434B5C;\n",
      "     box-shadow: 0px 1px 3px 1px rgba(0, 0, 0, 0.15);\n",
      "     filter: drop-shadow(0px 1px 2px rgba(0, 0, 0, 0.3));\n",
      "     fill: #FFFFFF;\n",
      "   }\n",
      " </style>\n",
      "\n",
      "     <script>\n",
      "       const buttonEl =\n",
      "         document.querySelector('#df-92442b02-b2cc-44cd-8b50-b94d07c2b274 button.colab-
df-convert');\n",
      "       buttonEl.style.display =\n",
      "         google.colab.kernel.accessAllowed ? 'block' : 'none';\n",
      "\n",
      "       async function convertToInteractive(key) {\n",
      "         const element = document.querySelector('#df-92442b02-b2cc-44cd-8b50-
b94d07c2b274');\n",
      "         const dataTable =\n",
      "           await google.colab.kernel.invokeFunction('convertToInteractive',\n",
      "                                                    [key], {});\n",
      "         if (!dataTable) return;\n",
      "\n",
      "         const docLinkHtml = 'Like what you see? Visit the ' +\n",
      "           '<a target=\"_blank\"
href=https://colab.research.google.com/notebooks/data_table.ipynb>data table notebook</a>'\n",
      "           + ' to learn more about interactive tables.';\n",
      "         element.innerHTML = '';\n",
      "         dataTable['output_type'] = 'display_data';\n",
      "         await google.colab.output.renderOutput(dataTable, element);\n",
      "         const docLink = document.createElement('div');\n",
      "         docLink.innerHTML = docLinkHtml;\n",
      "         element.appendChild(docLink);\n",
      "       }\n",
      "     </script>\n",
      "   </div>\n",
      " </div>\n",
      " "
     ]
    },
    "metadata": {},
```

```
    "execution_count": 21
   }
  ]
 },
 {
  "cell_type": "code",
  "source": [
   "data.info()"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/"
   },
   "id": "gTMfcCsdLMqM",
   "outputId": "b72d09ab-09e9-4818-956d-1d8b82c9d780"
  },
  "execution_count": 22,
  "outputs": [
   {
    "output_type": "stream",
    "name": "stdout",
    "text": [
     "<class 'pandas.core.frame.DataFrame'>\n",
     "RangeIndex: 4177 entries, 0 to 4176\n",
     "Data columns (total 9 columns):\n",
     " #   Column          Non-Null Count  Dtype  \n",
     "---  ------          --------------  -----  \n",
     " 0   Sex             4177 non-null   object \n",
     " 1   Length          4177 non-null   float64\n",
     " 2   Diameter        4177 non-null   float64\n",
     " 3   Height          4177 non-null   float64\n",
     " 4   Whole weight    4177 non-null   float64\n",
     " 5   Shucked weight  4177 non-null   float64\n",
     " 6   Viscera weight  4177 non-null   float64\n",
     " 7   Shell weight    4177 non-null   float64\n",
     " 8   Rings           4177 non-null   int64  \n",
     "dtypes: float64(7), int64(1), object(1)\n",
     "memory usage: 293.8+ KB\n"
    ]
   }
  ]
 },
 {
  "cell_type": "code",
  "source": [
   "data.describe()"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/",
    "height": 300
   },
   "id": "2INGQ3tILM0z",
   "outputId": "b49a76be-37aa-42b6-90ae-5f7f387c8e61"
  },
  "execution_count": 23,
  "outputs": [
```

```
{
 "output_type": "execute_result",
 "data": {
  "text/plain": [
   "          Length     Diameter      Height  Whole weight  Shucked weight  \\\n",
   "count  4177.000000  4177.000000  4177.000000   4177.000000    4177.000000   \n",
   "mean      0.523992     0.407881     0.139516      0.828742       0.359367   \n",
   "std       0.120093     0.099240     0.041827      0.490389       0.221963   \n",
   "min       0.075000     0.055000     0.000000      0.002000       0.001000   \n",
   "25%       0.450000     0.350000     0.115000      0.441500       0.186000   \n",
   "50%       0.545000     0.425000     0.140000      0.799500       0.336000   \n",
   "75%       0.615000     0.480000     0.165000      1.153000       0.502000   \n",
   "max       0.815000     0.650000     1.130000      2.825500       1.488000   \n",
   "\n",
   "      Viscera weight  Shell weight       Rings  \n",
   "count    4177.000000   4177.000000  4177.000000  \n",
   "mean        0.180594      0.238831     9.933684  \n",
   "std         0.109614      0.139203     3.224169  \n",
   "min         0.000500      0.001500     1.000000  \n",
   "25%         0.093500      0.130000     8.000000  \n",
   "50%         0.171000      0.234000     9.000000  \n",
   "75%         0.253000      0.329000    11.000000  \n",
   "max         0.760000      1.005000    29.000000  "
  ],
  "text/html": [
   "\n",
   "  <div id=\"df-a454068b-6ebf-4231-8ec9-28a12a8c0dbb\">\n",
   "    <div class=\"colab-df-container\">\n",
   "      <div>\n",
   "<style scoped>\n",
   "    .dataframe tbody tr th:only-of-type {\n",
   "        vertical-align: middle;\n",
   "    }\n",
   "\n",
   "    .dataframe tbody tr th {\n",
   "        vertical-align: top;\n",
   "    }\n",
   "\n",
   "    .dataframe thead th {\n",
   "        text-align: right;\n",
   "    }\n",
   "</style>\n",
   "<table border=\"1\" class=\"dataframe\">\n",
   "  <thead>\n",
   "    <tr style=\"text-align: right;\">\n",
   "      <th></th>\n",
   "      <th>Length</th>\n",
   "      <th>Diameter</th>\n",
   "      <th>Height</th>\n",
   "      <th>Whole weight</th>\n",
   "      <th>Shucked weight</th>\n",
   "      <th>Viscera weight</th>\n",
   "      <th>Shell weight</th>\n",
   "      <th>Rings</th>\n",
   "    </tr>\n",
   "  </thead>\n",
   "  <tbody>\n",
```

```
"   <tr>\n",
"     <th>count</th>\n",
"     <td>4177.000000</td>\n",
"     <td>4177.000000</td>\n",
"     <td>4177.000000</td>\n",
"     <td>4177.000000</td>\n",
"     <td>4177.000000</td>\n",
"     <td>4177.000000</td>\n",
"     <td>4177.000000</td>\n",
"     <td>4177.000000</td>\n",
"   </tr>\n",
"   <tr>\n",
"     <th>mean</th>\n",
"     <td>0.523992</td>\n",
"     <td>0.407881</td>\n",
"     <td>0.139516</td>\n",
"     <td>0.828742</td>\n",
"     <td>0.359367</td>\n",
"     <td>0.180594</td>\n",
"     <td>0.238831</td>\n",
"     <td>9.933684</td>\n",
"   </tr>\n",
"   <tr>\n",
"     <th>std</th>\n",
"     <td>0.120093</td>\n",
"     <td>0.099240</td>\n",
"     <td>0.041827</td>\n",
"     <td>0.490389</td>\n",
"     <td>0.221963</td>\n",
"     <td>0.109614</td>\n",
"     <td>0.139203</td>\n",
"     <td>3.224169</td>\n",
"   </tr>\n",
"   <tr>\n",
"     <th>min</th>\n",
"     <td>0.075000</td>\n",
"     <td>0.055000</td>\n",
"     <td>0.000000</td>\n",
"     <td>0.002000</td>\n",
"     <td>0.001000</td>\n",
"     <td>0.000500</td>\n",
"     <td>0.001500</td>\n",
"     <td>1.000000</td>\n",
"   </tr>\n",
"   <tr>\n",
"     <th>25%</th>\n",
"     <td>0.450000</td>\n",
"     <td>0.350000</td>\n",
"     <td>0.115000</td>\n",
"     <td>0.441500</td>\n",
"     <td>0.186000</td>\n",
"     <td>0.093500</td>\n",
"     <td>0.130000</td>\n",
"     <td>8.000000</td>\n",
"   </tr>\n",
"   <tr>\n",
"     <th>50%</th>\n",
```

```
"    <td>0.545000</td>\n",
"    <td>0.425000</td>\n",
"    <td>0.140000</td>\n",
"    <td>0.799500</td>\n",
"    <td>0.336000</td>\n",
"    <td>0.171000</td>\n",
"    <td>0.234000</td>\n",
"    <td>9.000000</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>75%</th>\n",
"    <td>0.615000</td>\n",
"    <td>0.480000</td>\n",
"    <td>0.165000</td>\n",
"    <td>1.153000</td>\n",
"    <td>0.502000</td>\n",
"    <td>0.253000</td>\n",
"    <td>0.329000</td>\n",
"    <td>11.000000</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>max</th>\n",
"    <td>0.815000</td>\n",
"    <td>0.650000</td>\n",
"    <td>1.130000</td>\n",
"    <td>2.825500</td>\n",
"    <td>1.488000</td>\n",
"    <td>0.760000</td>\n",
"    <td>1.005000</td>\n",
"    <td>29.000000</td>\n",
"   </tr>\n",
"  </tbody>\n",
"</table>\n",
"</div>\n",
"    <button class=\"colab-df-convert\" onclick=\"convertToInteractive('df-a454068b-6ebf-
4231-8ec9-28a12a8c0dbb')\"\n",
"            title=\"Convert this dataframe to an interactive table.\"\n",
"            style=\"display:none;\">\n",
"      \n",
"  <svg xmlns=\"http://www.w3.org/2000/svg\" height=\"24px\"viewBox=\"0 0 24 24\"\n",
"      width=\"24px\">\n",
"    <path d=\"M0 0h24v24H0V0z\" fill=\"none\"/>\n",
"    <path d=\"M18.56 5.44l.94 2.06.94-2.06 2.06-.94-2.06-.94-.94-2.06-.94 2.06-2.06.94zm-11
1L8.5 8.5l.94-2.06 2.06-.94-2.06-.94L8.5 2.5l-.94 2.06-2.06.94zm10 10l.94 2.06.94-2.06 2.06-.94-2.06-
.94-.94-2.06-.94 2.06-2.06.94z\"/><path d=\"M17.41 7.96l-1.37-1.37c-.4-.4-.92-.59-1.43-.59-.52 0-
1.04.2-1.43.59L10.3 9.45l-7.72 7.72c-.78.78-.78 2.05 0 2.83L4 21.41c.39.39.9.59 1.41.59.51 0 1.02-.2
1.41-.59l7.78-7.78 2.81-2.81c.8-.78.8-2.07 0-2.86zM5.41 20L4 18.59l7.72-7.72 1.47 1.35L5.41
20z\"/>\n",
"  </svg>\n",
"    </button>\n",
"    \n",
"  <style>\n",
"    .colab-df-container {\n",
"      display:flex;\n",
"      flex-wrap:wrap;\n",
"      gap: 12px;\n",
"    }\n",
```

```
          "\n",
          "    .colab-df-convert {\n",
          "      background-color: #E8F0FE;\n",
          "      border: none;\n",
          "      border-radius: 50%;\n",
          "      cursor: pointer;\n",
          "      display: none;\n",
          "      fill: #1967D2;\n",
          "      height: 32px;\n",
          "      padding: 0 0 0 0;\n",
          "      width: 32px;\n",
          "    }\n",
          "\n",
          "    .colab-df-convert:hover {\n",
          "      background-color: #E2EBFA;\n",
          "      box-shadow: 0px 1px 2px rgba(60, 64, 67, 0.3), 0px 1px 3px 1px rgba(60, 64, 67, 0.15);\n",
          "      fill: #174EA6;\n",
          "    }\n",
          "\n",
          "    [theme=dark] .colab-df-convert {\n",
          "      background-color: #3B4455;\n",
          "      fill: #D2E3FC;\n",
          "    }\n",
          "\n",
          "    [theme=dark] .colab-df-convert:hover {\n",
          "      background-color: #434B5C;\n",
          "      box-shadow: 0px 1px 3px 1px rgba(0, 0, 0, 0.15);\n",
          "      filter: drop-shadow(0px 1px 2px rgba(0, 0, 0, 0.3));\n",
          "      fill: #FFFFFF;\n",
          "    }\n",
          "  </style>\n",
          "\n",
          "      <script>\n",
          "        const buttonEl =\n",
          "          document.querySelector('#df-a454068b-6ebf-4231-8ec9-28a12a8c0dbb button.colab-
df-convert');\n",
          "        buttonEl.style.display =\n",
          "          google.colab.kernel.accessAllowed ? 'block' : 'none';\n",
          "\n",
          "        async function convertToInteractive(key) {\n",
          "          const element = document.querySelector('#df-a454068b-6ebf-4231-8ec9-
28a12a8c0dbb');\n",
          "          const dataTable =\n",
          "            await google.colab.kernel.invokeFunction('convertToInteractive',\n",
          "                                                     [key], {});\n",
          "          if (!dataTable) return;\n",
          "\n",
          "          const docLinkHtml = 'Like what you see? Visit the ' +\n",
          "            '<a target=\"_blank\"
href=https://colab.research.google.com/notebooks/data_table.ipynb>data table notebook</a>'\n",
          "            + ' to learn more about interactive tables.';\n",
          "          element.innerHTML = '';\n",
          "          dataTable['output_type'] = 'display_data';\n",
          "          await google.colab.output.renderOutput(dataTable, element);\n",
          "          const docLink = document.createElement('div');\n",
          "          docLink.innerHTML = docLinkHtml;\n",
          "          element.appendChild(docLink);\n",
```

```
        "       }\n",
        "     </script>\n",
        "    </div>\n",
        "  </div>\n",
        "  "
       ]
      },
      "metadata": {},
      "execution_count": 23
    }
  ]
},
{
  "cell_type": "code",
  "source": [
    "data.mode().T"
  ],
  "metadata": {
    "colab": {
      "base_uri": "https://localhost:8080/",
      "height": 332
    },
    "id": "Ng01tGvwLNGr",
    "outputId": "e105b794-4a9a-44d0-f2b5-f1c411686da4"
  },
  "execution_count": 24,
  "outputs": [
    {
      "output_type": "execute_result",
      "data": {
        "text/plain": [
          "                0     1\n",
          "Sex             M   NaN\n",
          "Length       0.55  0.625\n",
          "Diameter     0.45   NaN\n",
          "Height       0.15   NaN\n",
          "Whole weight  0.2225   NaN\n",
          "Shucked weight  0.175   NaN\n",
          "Viscera weight  0.1715   NaN\n",
          "Shell weight  0.275   NaN\n",
          "Rings          9.0   NaN"
        ],
        "text/html": [
          "\n",
          "  <div id=\"df-b22321aa-d0cd-414f-9ce2-5de8a49c2c35\">\n",
          "    <div class=\"colab-df-container\">\n",
          "      <div>\n",
          "<style scoped>\n",
          "    .dataframe tbody tr th:only-of-type {\n",
          "        vertical-align: middle;\n",
          "    }\n",
          "\n",
          "    .dataframe tbody tr th {\n",
          "        vertical-align: top;\n",
          "    }\n",
          "\n",
          "    .dataframe thead th {\n",
```

```
"      text-align: right;\n",
"    }\n",
"</style>\n",
"<table border=\"1\" class=\"dataframe\">\n",
"  <thead>\n",
"    <tr style=\"text-align: right;\">\n",
"      <th></th>\n",
"      <th>0</th>\n",
"      <th>1</th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>Sex</th>\n",
"      <td>M</td>\n",
"      <td>NaN</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Length</th>\n",
"      <td>0.55</td>\n",
"      <td>0.625</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Diameter</th>\n",
"      <td>0.45</td>\n",
"      <td>NaN</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Height</th>\n",
"      <td>0.15</td>\n",
"      <td>NaN</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Whole weight</th>\n",
"      <td>0.2225</td>\n",
"      <td>NaN</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Shucked weight</th>\n",
"      <td>0.175</td>\n",
"      <td>NaN</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Viscera weight</th>\n",
"      <td>0.1715</td>\n",
"      <td>NaN</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Shell weight</th>\n",
"      <td>0.275</td>\n",
"      <td>NaN</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Rings</th>\n",
"      <td>9.0</td>\n",
"      <td>NaN</td>\n",
"    </tr>\n",
```

```
"  </tbody>\n",
"</table>\n",
"</div>\n",
"     <button class=\"colab-df-convert\" onclick=\"convertToInteractive('df-b22321aa-d0cd-414f-9ce2-5de8a49c2c35')\"\n",
"            title=\"Convert this dataframe to an interactive table.\"\n",
"            style=\"display:none;\">\n",
"       \n",
"  <svg xmlns=\"http://www.w3.org/2000/svg\" height=\"24px\"viewBox=\"0 0 24 24\"\n",
"      width=\"24px\">\n",
"    <path d=\"M0 0h24v24H0V0z\" fill=\"none\"/>\n",
"    <path d=\"M18.56 5.44l.94 2.06.94-2.06 2.06-.94-2.06-.94-.94-2.06-.94 2.06-2.06.94zm-11 1L8.5 8.5l.94-2.06 2.06-.94-2.06-.94L8.5 2.5l-.94 2.06-2.06.94zm10 10l.94 2.06.94-2.06 2.06-.94-2.06-.94-.94-2.06-.94 2.06-2.06.94z\"/><path d=\"M17.41 7.96l-1.37-1.37c-.4-.4-.92-.59-1.43-.59-.52 0-1.04.2-1.43.59L10.3 9.45l-7.72 7.72c-.78.78-.78 2.05 0 2.83L4 21.41c.39.39.9.59 1.41.59.51 0 1.02-.2 1.41-.59l7.78-7.78 2.81-2.81c.8-.78.8-2.07 0-2.86zM5.41 20L4 18.59l7.72-7.72 1.47 1.35L5.41 20z\"/>\n",
"  </svg>\n",
"     </button>\n",
"     \n",
"  <style>\n",
"    .colab-df-container {\n",
"      display:flex;\n",
"      flex-wrap:wrap;\n",
"      gap: 12px;\n",
"    }\n",
"\n",
"    .colab-df-convert {\n",
"      background-color: #E8F0FE;\n",
"      border: none;\n",
"      border-radius: 50%;\n",
"      cursor: pointer;\n",
"      display: none;\n",
"      fill: #1967D2;\n",
"      height: 32px;\n",
"      padding: 0 0 0 0;\n",
"      width: 32px;\n",
"    }\n",
"\n",
"    .colab-df-convert:hover {\n",
"      background-color: #E2EBFA;\n",
"      box-shadow: 0px 1px 2px rgba(60, 64, 67, 0.3), 0px 1px 3px 1px rgba(60, 64, 67, 0.15);\n",
"      fill: #174EA6;\n",
"    }\n",
"\n",
"    [theme=dark] .colab-df-convert {\n",
"      background-color: #3B4455;\n",
"      fill: #D2E3FC;\n",
"    }\n",
"\n",
"    [theme=dark] .colab-df-convert:hover {\n",
"      background-color: #434B5C;\n",
"      box-shadow: 0px 1px 3px 1px rgba(0, 0, 0, 0.15);\n",
"      filter: drop-shadow(0px 1px 2px rgba(0, 0, 0, 0.3));\n",
"      fill: #FFFFFF;\n",
"    }\n",
"  </style>\n",
```

```
          "\n",
          "     <script>\n",
          "       const buttonEl =\n",
          "         document.querySelector('#df-b22321aa-d0cd-414f-9ce2-5de8a49c2c35 button.colab-
df-convert');\n",
          "       buttonEl.style.display =\n",
          "         google.colab.kernel.accessAllowed ? 'block' : 'none';\n",
          "\n",
          "       async function convertToInteractive(key) {\n",
          "         const element = document.querySelector('#df-b22321aa-d0cd-414f-9ce2-
5de8a49c2c35');\n",
          "         const dataTable =\n",
          "           await google.colab.kernel.invokeFunction('convertToInteractive',\n",
          "                                                    [key], {});\n",
          "         if (!dataTable) return;\n",
          "\n",
          "         const docLinkHtml = 'Like what you see? Visit the ' +\n",
          "           '<a target=\"_blank\"
href=https://colab.research.google.com/notebooks/data_table.ipynb>data table notebook</a>'\n",
          "           + ' to learn more about interactive tables.';\n",
          "         element.innerHTML = '';\n",
          "         dataTable['output_type'] = 'display_data';\n",
          "         await google.colab.output.renderOutput(dataTable, element);\n",
          "         const docLink = document.createElement('div');\n",
          "         docLink.innerHTML = docLinkHtml;\n",
          "         element.appendChild(docLink);\n",
          "       }\n",
          "     </script>\n",
          "    </div>\n",
          "  </div>\n",
          "  "
        ]
       },
       "metadata": {},
       "execution_count": 24
     }
    ]
   },
   {
    "cell_type": "code",
    "source": [
     "data.shape"
    ],
    "metadata": {
     "colab": {
      "base_uri": "https://localhost:8080/"
     },
     "id": "kl9S5kPWLNbo",
     "outputId": "2267ee6b-311e-47ac-fb41-56eb7665a3c2"
    },
    "execution_count": 25,
    "outputs": [
     {
      "output_type": "execute_result",
      "data": {
       "text/plain": [
        "(4177, 9)"
```

```
      ]
     },
     "metadata": {},
     "execution_count": 25
    }
   ]
  },
  {
   "cell_type": "code",
   "source": [
    "data.kurt()"
   ],
   "metadata": {
    "colab": {
     "base_uri": "https://localhost:8080/"
    },
    "id": "uMXVmP83LWQJ",
    "outputId": "f5943dbf-aea4-461f-e699-1943e08a34c5"
   },
   "execution_count": 26,
   "outputs": [
    {
     "output_type": "execute_result",
     "data": {
      "text/plain": [
       "Length           0.064621\n",
       "Diameter        -0.045476\n",
       "Height          76.025509\n",
       "Whole weight     -0.023644\n",
       "Shucked weight    0.595124\n",
       "Viscera weight    0.084012\n",
       "Shell weight      0.531926\n",
       "Rings            2.330687\n",
       "dtype: float64"
      ]
     },
     "metadata": {},
     "execution_count": 26
    }
   ]
  },
  {
   "cell_type": "code",
   "source": [
    "data.skew()"
   ],
   "metadata": {
    "colab": {
     "base_uri": "https://localhost:8080/"
    },
    "id": "2Qu3LQZnLWWz",
    "outputId": "084fe4f1-dd7c-4502-c004-821b2def68e2"
   },
   "execution_count": 27,
   "outputs": [
    {
     "output_type": "execute_result",
```

```
    "data": {
     "text/plain": [
      "Length          -0.639873\n",
      "Diameter        -0.609198\n",
      "Height           3.128817\n",
      "Whole weight     0.530959\n",
      "Shucked weight   0.719098\n",
      "Viscera weight   0.591852\n",
      "Shell weight     0.620927\n",
      "Rings            1.114102\n",
      "dtype: float64"
     ]
    },
    "metadata": {},
    "execution_count": 27
   }
  ]
 },
 {
  "cell_type": "code",
  "source": [
   "data.var()"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/"
   },
   "id": "LpDBYPqYLWzu",
   "outputId": "9aa2e894-e7ec-45ff-fad3-5d5bd8cf965e"
  },
  "execution_count": 28,
  "outputs": [
   {
    "output_type": "execute_result",
    "data": {
     "text/plain": [
      "Length           0.014422\n",
      "Diameter         0.009849\n",
      "Height           0.001750\n",
      "Whole weight     0.240481\n",
      "Shucked weight   0.049268\n",
      "Viscera weight   0.012015\n",
      "Shell weight     0.019377\n",
      "Rings           10.395266\n",
      "dtype: float64"
     ]
    },
    "metadata": {},
    "execution_count": 28
   }
  ]
 },
 {
  "cell_type": "code",
  "source": [
   "data.nunique()"
  ],
```

```
 "metadata": {
  "colab": {
   "base_uri": "https://localhost:8080/"
  },
  "id": "DJXWW2nCLXDF",
  "outputId": "c88ef836-2d3e-442e-a400-57299900a592"
 },
 "execution_count": 29,
 "outputs": [
  {
   "output_type": "execute_result",
   "data": {
    "text/plain": [
     "Sex               3\n",
     "Length          134\n",
     "Diameter         111\n",
     "Height            51\n",
     "Whole weight     2429\n",
     "Shucked weight    1515\n",
     "Viscera weight    880\n",
     "Shell weight      926\n",
     "Rings             28\n",
     "dtype: int64"
    ]
   },
   "metadata": {},
   "execution_count": 29
  }
 ]
},
{
 "cell_type": "markdown",
 "source": [
  "4.Check for missing values and deal with them"
 ],
 "metadata": {
  "id": "wdSFPC2jLinx"
 }
},
{
 "cell_type": "code",
 "source": [
  "data.isna()"
 ],
 "metadata": {
  "colab": {
   "base_uri": "https://localhost:8080/",
   "height": 424
  },
  "id": "gHVI37AELXRZ",
  "outputId": "3ce1737d-e983-4ae8-d496-e5d80572d1b1"
 },
 "execution_count": 30,
 "outputs": [
  {
   "output_type": "execute_result",
   "data": {
```

```
"text/plain": [
 "       Sex  Length  Diameter  Height  Whole weight  Shucked weight  \\\n",
 "0    False   False    False   False       False         False  \n",
 "1    False   False    False   False       False         False  \n",
 "2    False   False    False   False       False         False  \n",
 "3    False   False    False   False       False         False  \n",
 "4    False   False    False   False       False         False  \n",
 "...    ...     ...      ...     ...         ...           ...  \n",
 "4172  False   False    False   False       False         False  \n",
 "4173  False   False    False   False       False         False  \n",
 "4174  False   False    False   False       False         False  \n",
 "4175  False   False    False   False       False         False  \n",
 "4176  False   False    False   False       False         False  \n",
 "\n",
 "     Viscera weight  Shell weight  Rings  \n",
 "0           False         False  False  \n",
 "1           False         False  False  \n",
 "2           False         False  False  \n",
 "3           False         False  False  \n",
 "4           False         False  False  \n",
 "...           ...           ...    ...  \n",
 "4172        False         False  False  \n",
 "4173        False         False  False  \n",
 "4174        False         False  False  \n",
 "4175        False         False  False  \n",
 "4176        False         False  False  \n",
 "\n",
 "[4177 rows x 9 columns]"
],
"text/html": [
 "\n",
 "  <div id=\"df-a8411d4b-4063-4938-954c-594092ea8f5e\">\n",
 "    <div class=\"colab-df-container\">\n",
 "      <div>\n",
 "<style scoped>\n",
 "    .dataframe tbody tr th:only-of-type {\n",
 "        vertical-align: middle;\n",
 "    }\n",
 "\n",
 "    .dataframe tbody tr th {\n",
 "        vertical-align: top;\n",
 "    }\n",
 "\n",
 "    .dataframe thead th {\n",
 "        text-align: right;\n",
 "    }\n",
 "</style>\n",
 "<table border=\"1\" class=\"dataframe\">\n",
 "  <thead>\n",
 "    <tr style=\"text-align: right;\">\n",
 "      <th></th>\n",
 "      <th>Sex</th>\n",
 "      <th>Length</th>\n",
 "      <th>Diameter</th>\n",
 "      <th>Height</th>\n",
 "      <th>Whole weight</th>\n",
 "      <th>Shucked weight</th>\n",
```

```
"     <th>Viscera weight</th>\n",
"     <th>Shell weight</th>\n",
"     <th>Rings</th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"     <th>0</th>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"    </tr>\n",
"    <tr>\n",
"     <th>1</th>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"    </tr>\n",
"    <tr>\n",
"     <th>2</th>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"    </tr>\n",
"    <tr>\n",
"     <th>3</th>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"     <td>False</td>\n",
"    </tr>\n",
"    <tr>\n",
"     <th>4</th>\n",
"     <td>False</td>\n",
```

```
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>...</th>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>4172</th>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>4173</th>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>4174</th>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"    <td>False</td>\n",
"   </tr>\n",
```

```
"    <tr>\n",
"      <th>4175</th>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>4176</th>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"      <td>False</td>\n",
"    </tr>\n",
"  </tbody>\n",
"</table>\n",
"<p>4177 rows × 9 columns</p>\n",
"</div>\n",
"      <button class=\"colab-df-convert\" onclick=\"convertToInteractive('df-a8411d4b-4063-
4938-954c-594092ea8f5e')\"\n",
"              title=\"Convert this dataframe to an interactive table.\"\n",
"              style=\"display:none;\">\n",
"        \n",
"  <svg xmlns=\"http://www.w3.org/2000/svg\" height=\"24px\"viewBox=\"0 0 24 24\"\n",
"       width=\"24px\">\n",
"    <path d=\"M0 0h24v24H0V0z\" fill=\"none\"/>\n",
"    <path d=\"M18.56 5.44l.94 2.06.94-2.06 2.06-.94-2.06-.94-.94-2.06-.94 2.06-2.06.94zm-11
1L8.5 8.5l.94-2.06 2.06-.94-2.06-.94L8.5 2.5l-.94 2.06-2.06.94zm10 10l.94 2.06.94-2.06 2.06-.94-2.06-
.94-.94-2.06-.94 2.06-2.06.94z\"/><path d=\"M17.41 7.96l-1.37-1.37c-.4-.4-.92-.59-1.43-.59-.52 0-
1.04.2-1.43.59L10.3 9.45l-7.72 7.72c-.78.78-.78 2.05 0 2.83L4 21.41c.39.39.9.59 1.41.59.51 0 1.02-.2
1.41-.59l7.78-7.78 2.81-2.81c.8-.78.8-2.07 0-2.86zM5.41 20L4 18.59l7.72-7.72 1.47 1.35L5.41
20z\"/>\n",
"  </svg>\n",
"      </button>\n",
"      \n",
"  <style>\n",
"    .colab-df-container {\n",
"      display:flex;\n",
"      flex-wrap:wrap;\n",
"      gap: 12px;\n",
"    }\n",
"\n",
"    .colab-df-convert {\n",
"      background-color: #E8F0FE;\n",
"      border: none;\n",
"      border-radius: 50%;\n",
"      cursor: pointer;\n",
```

```
      "    display: none;\n",
      "    fill: #1967D2;\n",
      "    height: 32px;\n",
      "    padding: 0 0 0 0;\n",
      "    width: 32px;\n",
      "  }\n",
      "\n",
      "  .colab-df-convert:hover {\n",
      "    background-color: #E2EBFA;\n",
      "    box-shadow: 0px 1px 2px rgba(60, 64, 67, 0.3), 0px 1px 3px 1px rgba(60, 64, 67, 0.15);\n",
      "    fill: #174EA6;\n",
      "  }\n",
      "\n",
      "  [theme=dark] .colab-df-convert {\n",
      "    background-color: #3B4455;\n",
      "    fill: #D2E3FC;\n",
      "  }\n",
      "\n",
      "  [theme=dark] .colab-df-convert:hover {\n",
      "    background-color: #434B5C;\n",
      "    box-shadow: 0px 1px 3px 1px rgba(0, 0, 0, 0.15);\n",
      "    filter: drop-shadow(0px 1px 2px rgba(0, 0, 0, 0.3));\n",
      "    fill: #FFFFFF;\n",
      "  }\n",
      "</style>\n",
      "\n",
      "    <script>\n",
      "      const buttonEl =\n",
      "        document.querySelector('#df-a8411d4b-4063-4938-954c-594092ea8f5e button.colab-
df-convert');\n",
      "      buttonEl.style.display =\n",
      "        google.colab.kernel.accessAllowed ? 'block' : 'none';\n",
      "\n",
      "      async function convertToInteractive(key) {\n",
      "        const element = document.querySelector('#df-a8411d4b-4063-4938-954c-
594092ea8f5e');\n",
      "        const dataTable =\n",
      "          await google.colab.kernel.invokeFunction('convertToInteractive',\n",
      "                                                   [key], {});\n",
      "        if (!dataTable) return;\n",
      "\n",
      "        const docLinkHtml = 'Like what you see? Visit the ' +\n",
      "          '<a target=\"_blank\"
href=https://colab.research.google.com/notebooks/data_table.ipynb>data table notebook</a>'\n",
      "          + ' to learn more about interactive tables.';\n",
      "        element.innerHTML = '';\n",
      "        dataTable['output_type'] = 'display_data';\n",
      "        await google.colab.output.renderOutput(dataTable, element);\n",
      "        const docLink = document.createElement('div');\n",
      "        docLink.innerHTML = docLinkHtml;\n",
      "        element.appendChild(docLink);\n",
      "      }\n",
      "    </script>\n",
      "  </div>\n",
      "</div>\n",
      "\"
    ]
```

```
    },
    "metadata": {},
    "execution_count": 30
   }
  ]
 },
 {
  "cell_type": "code",
  "source": [
   "data.isna().any()"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/"
   },
   "id": "U7DDhiG5Ll_J",
   "outputId": "fd96a4dd-5be3-40b8-b44c-febcb1a4b7ae"
  },
  "execution_count": 31,
  "outputs": [
   {
    "output_type": "execute_result",
    "data": {
     "text/plain": [
      "Sex               False\n",
      "Length            False\n",
      "Diameter          False\n",
      "Height            False\n",
      "Whole weight      False\n",
      "Shucked weight    False\n",
      "Viscera weight    False\n",
      "Shell weight      False\n",
      "Rings             False\n",
      "dtype: bool"
     ]
    },
    "metadata": {},
    "execution_count": 31
   }
  ]
 },
 {
  "cell_type": "code",
  "source": [
   "data.isna().sum()"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/"
   },
   "id": "J2OKggfZLmTH",
   "outputId": "9af27e8f-2d5d-4846-d6cb-223d2c0aa149"
  },
  "execution_count": 32,
  "outputs": [
   {
    "output_type": "execute_result",
```

```
    "data": {
     "text/plain": [
      "Sex              0\n",
      "Length           0\n",
      "Diameter         0\n",
      "Height           0\n",
      "Whole weight     0\n",
      "Shucked weight   0\n",
      "Viscera weight   0\n",
      "Shell weight     0\n",
      "Rings            0\n",
      "dtype: int64"
     ]
    },
    "metadata": {},
    "execution_count": 32
   }
  ]
 },
 {
  "cell_type": "code",
  "source": [
   "data.isna().any().sum()"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/"
   },
   "id": "ZyPS6-c5Lmhn",
   "outputId": "0761b870-f739-4654-ec3e-4b4c402c67ad"
  },
  "execution_count": 33,
  "outputs": [
   {
    "output_type": "execute_result",
    "data": {
     "text/plain": [
      "0"
     ]
    },
    "metadata": {},
    "execution_count": 33
   }
  ]
 },
 {
  "cell_type": "markdown",
  "source": [
   "5.Find the outliers and replace them outliers"
  ],
  "metadata": {
   "id": "AOcJszyjONkD"
  }
 },
 {
  "cell_type": "code",
  "source": [
```

"sns.boxplot(data['Diameter'])"
],
"metadata": {
"colab": {
"base_uri": "https://localhost:8080/",
"height": 296
},
"id": "37mn3LaBLnBs",
"outputId": "4d0fd5e1-4099-4d8a-ed13-84689f687ca8"
},
"execution_count": 34,
"outputs": [
{
"output_type": "execute_result",
"data": {
"text/plain": [
"<matplotlib.axes._subplots.AxesSubplot at 0x7f39ea4065d0>"
]
},
"metadata": {},
"execution_count": 34
},
{
"output_type": "display_data",
"data": {
"text/plain": [
"<Figure size 432x288 with 1 Axes>"
],
"image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAANcElEQVR4nO3dcWyc91nA8e9ju9A0yQZN2gol00zmTGWshTEz
UCTgiFopSsfY1BSBWpqi0WoIpWkz0FASqSprmBioUNIglPaPJaqiouSfNsNEtGsmRKVKOLRZ6MjoNUvEIrFl
LnSp03Z18uOPO7v2LcV3tu8en/39SJbOd2d2/ufX45+5s3r+/OUUpBktR5PdkDSNJiZYAlKYkBlqQkBliSkhhgS
UrS18rGK1euLP39/W0aRZIWpmPHjn2/lHJN4/UtBbi/v5/h4eHjn2m0qSFoGIOHO56z0FIUlJDLAkJTHAkpTE
AEtSEgMsSUkMsCQlMcCSlMQAS1ISAyxJSQywJCUxwJKUxABLUhIDLElJDLAkJTHAkpTEAEtSEgMsSUkMs
CQlMcCSlKSl3wknzTe7d++mWq1mj/Ejzp49C8Cq1auzdEamDZKLxTe7PWLrPK0mlzRGJqZ7a8fNlarsSYm/y2kixLP2TqhKY4kRqnzn34MKnYB
U/ReeB2A/367M99ivRde68h+NLcMsLrexauu5s3rN2aPMcWSk0MAHZtrfH/qLp4DlqQkBliSkhhgSUpigC
UpiQGWpCQGWJKSGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGWJK
SGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGWpCQGWJKSGGBJSmKAJSmJA
ZakJAZYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGuEW7d+9m9m9+9+7d2WNI6aqfs/VLfbwdgOd2vp
tZo9gqQOauf3vEfAkpTEAEtSEgMsSUkMsCQlMcCSlMQAS1ISAyxJSQywJCUxwJKUxABLUhIDLElJDLAkJTH
AkpTEAEtSEgMsSUkMsCQlMcCSlMQAS1ISAyxJSQywJCUxwJKUxABLUhIDLElJDLAkJTHAkpTEAEtSko4EeGRkhHvvZE
5uZ9qtTpxf9VqlVtuuYUDBw5QqVQ4evQvevQzz333333MTl8dsff/xxKpUKhw8f8f5rHHHqNSqXD33XdTqVTYs2cP
z31FJVKhUcffZT169dz7Nixie1/p+SixesOHz7M9M9u3bqVQVQnDp1ao7+Vif/fs4f4Ozz4/fz8uuu4+LFi
G+z1p/cdz7Nixie1/p+SixesOHz7M9M9u3bqVQVQnDp1ao7+Vif/fs4f4Ozz4/fz8uuu4+LFi
OcOXOG/fv3c/z4cUZHR9m7dy8Au3btmth+165dPHjwIAAPP/wwAADx4kIgA4NC
hQwA88MADjI6O/sifOX/+/Iznl6TJ2n4EPDw8PHHDw8OjH6qpEjRyilcOTIkRfBU++n9OnT1NKYyP
sYnLjbePh7RR4/VvvPHGxWd6dAmAixcvzvgoeOZcnmZcXnfmZMWnT9/nq1bt6tbAnHRDgi7omI4YgPPnfuXMX7FXDB
bsW1NVq1V6fnj5f1QXk+572CDgi7omI4YgYPnfuXMs7ePbZZ6kT7zzDOtT
9lwP5K0EEx7BFxK2QvsBRgcHGcHGz5UOOmm25iaGiGtnJvGCtv31EntN26lWOn
vps9RrpLV76PgTXX+XXZBu38X0XbzwFv3ryZnp7abnp7e7nzzjtnfT/jrrjiilnvnPNxPLLy9P2a+khaXtAV6xYgUb
NmwgltiwYQMrVqyY9f309/cH/cTEWzcuJH+/v4fuOUUWYN/yP+wThjq/nL+Q9GvzXYTSbd+GMpnzZA8cfi6+iuH2QYRFN76IrxcJJcd2lfZRtpf1RGtHeB
ibryPOAN2/ezA033DDjo9/G+9m5c+f+7c/fE/e3cuZOlS5dyzz33/UvBjxw62b98+cXn11r9+fvttwOWd
u1aAG677Tbuu++5fGuYg3K47+u8o+KeP7h+g5fcGGuVttv7B8/2+/+MwS4yYZ+O+W+JJLDs8JdqFn7LStg7xcc8Bt8VcfM9HxLFSymDj9bu4UWZKSGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYk
BlqQkBliSkhhgSUpigCUpiQGWpCQGWpCQGWJKSGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQk
BliSkhhgSUpigCUpiQGWpCQGWJKSGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQk
BliSkhhgSUpigCUpiQGWpCQGWJKSGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQk

BliSkhhgSUpigCUpiQGWpCQGWJKSGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpi
QGWpCQGWJKSGGBJStKXPUC3GRgYyB5BUge183veALdoy5Yt2SNI6qB2fs97CkKSkhhgSUpigCUpiQGW
pCQGWJKSGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGWJKSGGBJS
mKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGWJKSGGBJSmKAJSmJAZakJAZY
kpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCR92QNIs9V74TWWnBzKHmOK3gsjAB2bq/fCa8B1Hd
mX5o4BVlcbGBjIHuGyzp4dA2DVqk5F8bp5+3eh92aA1dW2bNmSPYI0Y54DlqQkBliSkhhgSUpigCUpiQG
WpCQGWJKSGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGWJKSGGBJ
SmKAJSlJlFKa3zjiHHCmfePM2Erg+9lDzBHXMj8tpLXAwlpPN6zlg6WUaxqvbCnA81VEDJdSBrPnmAuuZX5
aSGuBhbWebl6LpyAkKYkBlqQkCyXAe7MHmEOuZX5aSGuBhbWerl3LgjgHLEndaKEcAUtS1zHAkpSkqwIc
ERsi4lsRUY2IP7nM7b8aEf8WEWMRsSljxmY1sZZtEfHNiPhGRHwtIj6YMWczmljL5yLiRES8FBH/EhEfyZizG
dOtZdJ2t0ZEiYh5+/SnJh6XuyLiXP1xeSkifj9jzmY087hExG/Vv2dejogDnZ5xRkopXfEB9AKvAmuAHwOOAx
9p2KYfuBHYD2zKnnmWa/l14Kr65T8A/j577lms5X2TLn8KOJI990zXUt9uOfDPwAvAYPbcs3hc7gIezZ51jta
yFngR+Mn659dmz93MRzcdAX8CqJZSTpVSfgg8Cfzm5A1KKadLKd8ALmUM2IJm1nK0lHKh/ukLwOoOz9i
sZtbyg0mfLgXm609+p11L3ReBPwfe6uRwLWp2Ld2gmbXcDewppfwPQCnlex2ecUa6KcCrgP+a9Pl36td1
o1bX8lngH9s60cw1tZaI+MOIeBX4MnBvh2Zr1bRriYhfAD5QSvmHTg42A81+jd1aP811KCI+0JnRWtbMW
j4MfDgino+IFyJiQ8emm4VuCvCiFBF3AIPAX2TPMhullD2llA8BXwB2Zs8zExHRAzwMfD57ljlyGOgvpdwIP
APsS55nNvqonYaoAL8DPBYRP5E6URO6KcBngcn/Qq+uX9eNmlpLRNwE7AA+VUp5u0OztarVx+VJ4NNtn
WjmplvLcuCjwNcj4jTwy8DT8/QHcdM+LqWUkUlfV48DH+/QbK1q5mvsO8DTpZR3SinfBv6TWpDnt+yT0
C2ciO8DTgE/zbsn4n/2Pbb9CvP7h3DTrgX4GLUfPKzNnncO1rJ20uXfAIaz557t11h9+68zf38I18zj8lOTLn8
GeCF77lmsZQOwr355JbVTFiuyZ592bdkDtPhAbKT2L9urwI76dX9K7QgR4Bep/Us4CowAL2fPPIu1PAt8F3
ip/vF09syzWMsjwMv1dRz9/6KW/THdWhq2nbcBbvJx+VL9cTlef1yuz555FmsJaqeHvgmcAH47e+ZmPnw
psiQl6aZzwJK0oBhgSUpigCUpiQGWpCQGWJKSGGB1VERcrL/z1ssRcTwiPl9/hRkRMRgRf9Pm/X96Pr8bm
xYXn4amjoqIN0opy+qXrwUOAM+XUh7o0P6/Any1lHKohT/TV0oZa99UWqwMsDpqcoDrn68B/pXaq5d+
DfijUsonI+lT1F7AcSXwJvB7pZRvRcRd1F7KvJTaS03/ktqro34XeBvYWEp5LSI+BOwBgrGuUHu3rKuBrwKv1
z9urY8xZbtSysl6qN+i9orE50sp29rzN6LFrC97AC1upZRTEdELXNtw00ngV0opY/X3xPgz3g3mR6mF8UqgC
nyhlPKxiPgr4E7gr6n9osbPlVJeiYhfAv6Ev5Ep5m0hFwRHytcTtgfX0/q4F1pZSLbVq+FjkDrPnq/cC+iFhL7f2
Dr5h029FSynngfES8Tu1dvaD2EtQbI2IZsA44GBHjf+bHG3fQxHYHja/ayQArVf0UxEXge8DPTLrpi9RC+5mI
6Kf2vgvjJr8z3KVJn1+i9jXdA/xvKeXnp9n9dNuNNrEEacZ8FoTSRMQ1wN9R+7U4jT+MeD/vvuXgXa3cb6n
9Bo5vR8Rt9f1ERPxc/ebz1N5WcrrtpLYzwOq0JeNPQ6P2jm//BDx4me2+DHwpIl5kZv9Tux34bEQcp/aOX
+O/wuZJ4I8j4sX6D+reazup7XwWhCQl8QhYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpyf8B6t3huXNAY7
AAAAAASUVORK5CYII=\n"
        },
        "metadata": {
          "needs_background": "light"
        }
       }
      ]
     },
     {
      "cell_type": "code",
      "source": [
       "quant=data.quantile(q=[0.25,0.75])\n",
       "quant"
      ],
      "metadata": {
       "colab": {
        "base_uri": "https://localhost:8080/",
        "height": 112
       },
       "id": "NMzbLxFPLnNA",
       "outputId": "dca66c46-37d5-41fb-b310-de85743160d7"
      },
      "execution_count": 35,
      "outputs": [
       {
        "output_type": "execute_result",
        "data": {

```
"text/plain": [
 "     Length  Diameter  Height  Whole weight  Shucked weight  Viscera weight  \\\n",
 "0.25   0.450     0.35   0.115       0.4415          0.186          0.0935   \n",
 "0.75   0.615     0.48   0.165       1.1530          0.502          0.2530   \n",
 "\n",
 "     Shell weight  Rings  \n",
 "0.25        0.130    8.0  \n",
 "0.75        0.329   11.0  "
],
"text/html": [
 "\n",
 "  <div id=\"df-9ff316b4-0db9-4e7a-b348-7f1bd2955e09\">\n",
 "    <div class=\"colab-df-container\">\n",
 "      <div>\n",
 "<style scoped>\n",
 "    .dataframe tbody tr th:only-of-type {\n",
 "        vertical-align: middle;\n",
 "    }\n",
 "\n",
 "    .dataframe tbody tr th {\n",
 "        vertical-align: top;\n",
 "    }\n",
 "\n",
 "    .dataframe thead th {\n",
 "        text-align: right;\n",
 "    }\n",
 "</style>\n",
 "<table border=\"1\" class=\"dataframe\">\n",
 "  <thead>\n",
 "    <tr style=\"text-align: right;\">\n",
 "      <th></th>\n",
 "      <th>Length</th>\n",
 "      <th>Diameter</th>\n",
 "      <th>Height</th>\n",
 "      <th>Whole weight</th>\n",
 "      <th>Shucked weight</th>\n",
 "      <th>Viscera weight</th>\n",
 "      <th>Shell weight</th>\n",
 "      <th>Rings</th>\n",
 "    </tr>\n",
 "  </thead>\n",
 "  <tbody>\n",
 "    <tr>\n",
 "      <th>0.25</th>\n",
 "      <td>0.450</td>\n",
 "      <td>0.35</td>\n",
 "      <td>0.115</td>\n",
 "      <td>0.4415</td>\n",
 "      <td>0.186</td>\n",
 "      <td>0.0935</td>\n",
 "      <td>0.130</td>\n",
 "      <td>8.0</td>\n",
 "    </tr>\n",
 "    <tr>\n",
 "      <th>0.75</th>\n",
 "      <td>0.615</td>\n",
 "      <td>0.48</td>\n",
```

```
"     <td>0.165</td>\n",
"     <td>1.1530</td>\n",
"     <td>0.502</td>\n",
"     <td>0.2530</td>\n",
"     <td>0.329</td>\n",
"     <td>11.0</td>\n",
"   </tr>\n",
"  </tbody>\n",
"</table>\n",
"</div>\n",
"     <button class=\"colab-df-convert\" onclick=\"convertToInteractive('df-9ff316b4-0db9-4e7a-b348-7f1bd2955e09')\"\n",
"             title=\"Convert this dataframe to an interactive table.\"\n",
"             style=\"display:none;\">\n",
"       \n",
"  <svg xmlns=\"http://www.w3.org/2000/svg\" height=\"24px\"viewBox=\"0 0 24 24\"\n",
"      width=\"24px\">\n",
"    <path d=\"M0 0h24v24H0V0z\" fill=\"none\"/>\n",
"    <path d=\"M18.56 5.44l.94 2.06.94-2.06 2.06-.94-2.06-.94-.94-2.06-.94 2.06-2.06.94zm-11 1L8.5 8.5l.94-2.06 2.06-.94-2.06-.94L8.5 2.5l-.94 2.06-2.06.94zm10 10l.94 2.06.94-2.06 2.06-.94-2.06-.94-.94-2.06-.94 2.06-2.06.94z\"/><path d=\"M17.41 7.96l-1.37-1.37c-.4-.4-.92-.59-1.43-.59-.52 0-1.04.2-1.43.59L10.3 9.45l-7.72 7.72c-.78.78-.78 2.05 0 2.83L4 21.41c.39.39.9.59 1.41.59.51 0 1.02-.2 1.41-.59l7.78-7.78 2.81-2.81c.8-.78.8-2.07 0-2.86zM5.41 20L4 18.59l7.72-7.72 1.47 1.35L5.41 20z\"/>\n",
"  </svg>\n",
"     </button>\n",
"     \n",
"  <style>\n",
"    .colab-df-container {\n",
"      display:flex;\n",
"      flex-wrap:wrap;\n",
"      gap: 12px;\n",
"    }\n",
"\n",
"    .colab-df-convert {\n",
"      background-color: #E8F0FE;\n",
"      border: none;\n",
"      border-radius: 50%;\n",
"      cursor: pointer;\n",
"      display: none;\n",
"      fill: #1967D2;\n",
"      height: 32px;\n",
"      padding: 0 0 0 0;\n",
"      width: 32px;\n",
"    }\n",
"\n",
"    .colab-df-convert:hover {\n",
"      background-color: #E2EBFA;\n",
"      box-shadow: 0px 1px 2px rgba(60, 64, 67, 0.3), 0px 1px 3px 1px rgba(60, 64, 67, 0.15);\n",
"      fill: #174EA6;\n",
"    }\n",
"\n",
"    [theme=dark] .colab-df-convert {\n",
"      background-color: #3B4455;\n",
"      fill: #D2E3FC;\n",
"    }\n",
"\n",
```

```
          "    [theme=dark] .colab-df-convert:hover {\n",
          "      background-color: #434B5C;\n",
          "      box-shadow: 0px 1px 3px 1px rgba(0, 0, 0, 0.15);\n",
          "      filter: drop-shadow(0px 1px 2px rgba(0, 0, 0, 0.3));\n",
          "      fill: #FFFFFF;\n",
          "    }\n",
          "  </style>\n",
          "\n",
          "      <script>\n",
          "        const buttonEl =\n",
          "          document.querySelector('#df-9ff316b4-0db9-4e7a-b348-7f1bd2955e09 button.colab-
df-convert');\n",
          "        buttonEl.style.display =\n",
          "          google.colab.kernel.accessAllowed ? 'block' : 'none';\n",
          "\n",
          "        async function convertToInteractive(key) {\n",
          "          const element = document.querySelector('#df-9ff316b4-0db9-4e7a-b348-
7f1bd2955e09');\n",
          "          const dataTable =\n",
          "            await google.colab.kernel.invokeFunction('convertToInteractive',\n",
          "                                                     [key], {});\n",
          "          if (!dataTable) return;\n",
          "\n",
          "          const docLinkHtml = 'Like what you see? Visit the ' +\n",
          "            '<a target=\"_blank\"
href=https://colab.research.google.com/notebooks/data_table.ipynb>data table notebook</a>'\n",
          "            + ' to learn more about interactive tables.';\n",
          "          element.innerHTML = '';\n",
          "          dataTable['output_type'] = 'display_data';\n",
          "          await google.colab.output.renderOutput(dataTable, element);\n",
          "          const docLink = document.createElement('div');\n",
          "          docLink.innerHTML = docLinkHtml;\n",
          "          element.appendChild(docLink);\n",
          "        }\n",
          "      </script>\n",
          "    </div>\n",
          "  </div>\n",
          "  "
        ]
       },
       "metadata": {},
       "execution_count": 35
      }
     ]
    },
    {
     "cell_type": "code",
     "source": [
      "iqr=quant.loc[0.75]-quant.loc[0.25]\n",
      "iqr"
     ],
     "metadata": {
      "colab": {
       "base_uri": "https://localhost:8080/"
      },
      "id": "8qedJtgxL0nD",
      "outputId": "424db374-b826-442b-84ca-96a42d4268f4"
```

```
 },
 "execution_count": 36,
 "outputs": [
  {
   "output_type": "execute_result",
   "data": {
    "text/plain": [
     "Length          0.1650\n",
     "Diameter        0.1300\n",
     "Height          0.0500\n",
     "Whole weight    0.7115\n",
     "Shucked weight  0.3160\n",
     "Viscera weight  0.1595\n",
     "Shell weight    0.1990\n",
     "Rings           3.0000\n",
     "dtype: float64"
    ]
   },
   "metadata": {},
   "execution_count": 36
  }
 ]
},
{
 "cell_type": "code",
 "source": [
  "low=quant.loc[0.25]-(1.5*iqr)\n",
  "low"
 ],
 "metadata": {
  "colab": {
   "base_uri": "https://localhost:8080/"
  },
  "id": "ZnRm-DwSL00R",
  "outputId": "9d86659d-3b3b-458c-d472-f057ff3ed28f"
 },
 "execution_count": 37,
 "outputs": [
  {
   "output_type": "execute_result",
   "data": {
    "text/plain": [
     "Length          0.20250\n",
     "Diameter        0.15500\n",
     "Height          0.04000\n",
     "Whole weight   -0.62575\n",
     "Shucked weight -0.28800\n",
     "Viscera weight -0.14575\n",
     "Shell weight   -0.16850\n",
     "Rings           3.50000\n",
     "dtype: float64"
    ]
   },
   "metadata": {},
   "execution_count": 37
  }
 ]
```

```
},
{
 "cell_type": "code",
 "source": [
  "up=quant.loc[0.75]+(1.5*iqr)\n",
  "up"
 ],
 "metadata": {
  "colab": {
   "base_uri": "https://localhost:8080/"
  },
  "id": "o_gGblyWL0-e",
  "outputId": "f3599af7-e974-4582-c8f1-3dccbb9cc292"
 },
 "execution_count": 38,
 "outputs": [
  {
   "output_type": "execute_result",
   "data": {
    "text/plain": [
     "Length           0.86250\n",
     "Diameter         0.67500\n",
     "Height           0.24000\n",
     "Whole weight      2.22025\n",
     "Shucked weight    0.97600\n",
     "Viscera weight    0.49225\n",
     "Shell weight      0.62750\n",
     "Rings           15.50000\n",
     "dtype: float64"
    ]
   },
   "metadata": {},
   "execution_count": 38
  }
 ]
},
{
 "cell_type": "code",
 "source": [
  "data['Diameter']=np.where(data['Diameter']<0.155,0.4078,data['Diameter'])\n",
  "sns.boxplot(data['Diameter'])"
 ],
 "metadata": {
  "colab": {
   "base_uri": "https://localhost:8080/",
   "height": 296
  },
  "id": "e_KEYtJCL1J9",
  "outputId": "823e1af4-2d65-40cd-d769-fecadd1b2191"
 },
 "execution_count": 39,
 "outputs": [
  {
   "output_type": "execute_result",
   "data": {
    "text/plain": [
     "<matplotlib.axes._subplots.AxesSubplot at 0x7f39ea30a190>"
```

]
},
"metadata": {},
"execution_count": 39
},
{
"output_type": "display_data",
"data": {
"text/plain": [
"<Figure size 432x288 with 1 Axes>"
],
"image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAKo0lEQVR4nO3df6zdd13H8de7rbqOATK7LaYj1HFHEAmKNmhIjE
qIWYhOyKKJUXEGNRgTUCCiSZGSTSiUWedMdMY9w+Zgb8GooAEYlyyxC7bwOHQwxCliVJWHNN2g3Uf
/zhn6eVm5J7b3vN99977eCQ3OT++vd/3p+feZ0+/51eNMQLA9PZ1DwCwCwVwkwQBMMBBmgiwABNBBBigy
YGtbHzo0KFx5MiRiRFY0CsDvdd999XxjXLPx8i0F+MiRIzl58uT2TQWB1TV557tcocgAJoIMEATAQZoIsAA
TQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBBgigiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaLKlz
4SDZ3PixxnMZrPuMbbs1Kra3l2LFj3WMwMQHmks1szzzwz/+S81de3T3T3T3Kluw/+1iS5L+
e7P012H/2TOv+6SPAbIvzcyW3Lw4Q8mSfvcz8zB3uMYMEATAQZoIsAATQZoIsAATQQYoIkAAzQRYIA
mAgzQRIABmggwQBMBBBgiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EW
CAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBBgiwABNBBigiQADNBFg
gCYCDNBEgAGaCDBAk0kCfOLEiZw4cXKXQFsq1X268BKvusGs9lsit0AbLtV9sshIAmAgzQRIABmggwQ
BMBBBgiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgem2MmpU6MmpU6dy7ty5+
XKZms1kOHjy4ku+96T3gvrFqgvrFqjpZVSdPnz69eU5SYV5/WkeKmUEVZLpEEa9LAeEZ3DHJ0QU+6O33U79u
+QSyPAXLJjx451jwA7kmPAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIsAATQQYoIkAA
zQRYIAmAgzQRIABmggwQBMBBBgY1xlh+46rTST63unG21aEkX+weYmJ7cc3J3J3lz3XlzzsnP
X/aIxxjUbL9xSgHheU6qjRzSaP7mT3amb6mdKJeWSde841OFfkHZkKhjHGFyaecdvs5ZbhhyvwOSuFhF
9649BgxwudvN94ABLmsCDNBkRwe4qqqqtqRaLtmUkpO8/Z2wj6hJn+0AOKtwpVPqf7NsWPvOpeYVKnsVVUvyIs
FX9Y1W9rGPO7bTZmtdtd0VjaraFU9VWuK2YUz3Oq6PbsVRWhvBOdn3nNQyVRwdreZU9Ti83vyBdLl/
YXdLDuKVHPFgXIzFzSPVTdtwmzVq5adGl0W7cqLfLWSYY3YtPJRzWXmebNJ7d8VJfe9hyhw8tBzLq7vMIrGqwQ/lEz5i4ojxqLhnAwqHvMqhb
vaK8n+JJ9JckOSb2jbQeHIFqL4PtV/R5UJWxDq8uOGDLhcSBHpxjdQqRomj0J2m8YIeRzKTUkcKs8HNz/Z
j6QGjxpybiNf/LNAiZEpDHJnTmMs+bm9Rl1jJQz5xNqoYRLPUUE7S+rcoFuVHdOaZVr7n8mUA+b8GBHqz5rOKBL
MHC5mnhD7zJkXHv0NtAg9r6/uT9LRsOlzKx9Jy7aq9fH7fX/lxbgGGbJHlxGjYB9KFQbt0ZMGyVP4v66E
ATV8GvAr+Hfc2A+5EXx2Iv1rHvnBB4rZnOM7CTc9+SiycaE4rp+8Oa0mzZU2rvwymW0GTafNq3w/AeaK
REt+3NP4pNWoQYx1Nrn0Ds9bTfJq+ArR0f6qHB0CRvwMCjMHL2Dj3X8XlrNRvYRKyNnpCPNvQKRmz2Y0L+
v1zHUa5khn1ECL9ZLuuLJ7kRO7HVB1flEYTzVvbSKYgMCTwfUKD6wq7yH3ZTXcHVtf9fVg7VeSkHc2
RfzpUUXjuvXszdzF7CORHDxmCf9Vy8ch8gDIWlEedWwEWi4uxr/NLeYaLOHyELuNWoBFXFzZDWH0jbc80PKE
vEy9vIEKvOeDeyD/nCrCWQfOVNZfHCD7z8xZj5DbYsIYEgVhPRTgt6Yxd9yCk1L3fy4+qwVaMpTl6Fa1

```
BvCW7fyfcf8E0E+W1U/vthPVdV3Lq5+PPO3r9xsO1g5AWZqB595GlqSv0/y4SS/+SzbvTvJ71TV/bm4/6n9
VJI3VdWDSR7KhY+1uSvJO6rq/sUDdV9vO1g5z4IAaOIeMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQ5P8B
PsukWWsJ1kcAAAAASUVORK5CYII=\n"
        },
        "metadata": {
          "needs_background": "light"
        }
       }
      ]
     },
     {
      "cell_type": "code",
      "source": [
       "sns.boxplot(data['Length'])"
      ],
      "metadata": {
       "colab": {
        "base_uri": "https://localhost:8080/",
        "height": 296
       },
       "id": "BmtLzQzoL1ce",
       "outputId": "85ede685-3756-4b95-86eb-02a16251c9cc"
      },
      "execution_count": 40,
      "outputs": [
       {
        "output_type": "execute_result",
        "data": {
         "text/plain": [
          "<matplotlib.axes._subplots.AxesSubplot at 0x7f39ea2d39d0>"
         ]
        },
        "metadata": {},
        "execution_count": 40
       },
       {
        "output_type": "display_data",
        "data": {
         "text/plain": [
          "<Figure size 432x288 with 1 Axes>"
         ],
         "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAANc0lEQVR4nO3df2yc913A8ffHbcnoSrsrAAAAAElFTkSuQmCC
```

qZNmxgdHWXdunXUarU3bePgwYMMDQ3x8MMPMzg4yAMPPMDg4CAjIyMMDQ0xMjIya3nzv4888gh
DQ0Pcf//9DA4OcuLEicvaJ5JUSYB3797NkSNH2LNnT9uvt3PnTk6dOsW2bds4cuQI27dv59SpU+zcufNN2
7jvvvuYnp7m8ccfB2Dfvn0A7N27l+npafbu3TtrefO/jz32GNPT0+zfvx+A48ePz+tzkaTzdTzAExMTHDhwgFI
KBw4caPkouJXr1Wo1xsfHAZicnKSUwuTkJADj4+OMjY2d28bU1FTbPqcZHgVLuhy9nb6B3bt3Mz09DcDZ
s2fZs2cP9957b1uuN3OUezHbtm07t41OOH78OJs3b+7Y9jU/tVqNntdL9hhdo+fMq9Rq3/Z79DLVajUWLl
zYkW3PeQQcEb8dEaMRMXry5Ml538DTTz997uhzamqKp556qm3Xmzn6vZjJycmOHPlKUjvMeQRcStkF7
AIYGBiY9+HFLbfcwr59+5iamqK3t5dbb721bdfr6+u7ZISXLFnCmTNnOhrhBx98sGPb1vxs3ryZsRc9LTRj+u
3X0f/e5X6PXqZO/gTR8XPAGzdupKenfjMLFizgzjvvbNv1tm7deslt7Nix49w2OuGGG27o2LYlXf06HuClS5e
yZs0aIoI1a9awdOnStl2vv7+fvr4+oH60GxEsWbIEqB8dr169+tw2envbf7p7+fLlbd+mpGtHJb+GtnHjRlatW
tXy0e98rrd161YWL17Mjh07WLVqFdu3b2fx4sXnjo5ntrFlyxZ6enrYsGEDAGvXrgVg/fr19PT0sH79+lnLm/
+944476Onp4bbbbgM8+pV0+aKU1k/rDgwMlNHR0Q6Oc+WYOS/k+bXuMXMO+LWb1maPMsvCo/XfL6
9ytoVH97Hac8CXrR339YgYK6UMnL/cpyJLUhIDLElJDLAkJTHAkpTEAEtSEgMsSUkMsCQlMcCSlMQAS1IS
AyxJSQywJCUxwJKUxABLUhIDLElJDLAkJTHAkpTEAEtSEgMsSUkMsCQlMcCSlMQAS1ISAyxJSQywJCUxwJ
KUxABLUhIDLElJDLAkJTHAkpTEAEtSEgMsSUkMsCQlMcCSlMQAS1ISAyxJSQywJCUxwJKUxABLUhIDLElJe
rMHuFL19/dnjyCpAp28rxvgt2h4eDh7BEkV6OR93VMQkpTEAEtSEgMsSUkMsCQlMcCSlMQAS1ISAyxJS
QywJCUxwJKUxABLUhIDLElJDLAkJTHAkpTEAEtSEgMsSUkMsCQlMcCSlMQAS1ISAyxJSQywJCUxwJKUxA
BLUhIDLElJDLAkJTHAkpTEAEtSEgMsSUkMsCQlMcCSlMQAS1ISAyxJSQywJCUxwJKUxABLUhIDLElJDLAkJ
THAkpTEAEtSEgMsSUkMsCQl6c0eQGqnBadfYeHRfdljzLLg9ARApbMtOP0KsLyy29P8GWBdNfr7+7NHuK
hjx6YAWLGiyiAu7+p9lgOsq8jw8HD2CNK8eA5YkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCQGW
JKSGGBJSmKAJSmJAZakJAZYkpIYYElKYoAlKYkBlqQkBliSkhhgSUpigCUpiQGWpCRRSml95YiTwDc6Nw4A
y4CXO3wbl8sZ2+dKmNMZ2+NanvE9pZTrz184rwBXISJGSykD2XNcijO2z5UwpzO2hzPO5ikISUpigCUpSTc
GeFf2AC1wxva5EuZ0xvZwxvN03TlgSbpWdOMRsCRdEwywJCVJC3BErIml/4qIWkT80QU+/gsR8eWImIqI
j3XpjJ+KiOcj4qsR8U8R8Z4unPF3IuJIRByOiH+NiJXdNmPTeusjokRE5b+q1MJ+vCsiTjb24+GI+K2qZ2xlzsY6
v9H4vnwuIv6622aMiD9v2o9fi4hvduGMPxQRByPiK43799qODFJKqfwNWAC8ALwXeBvwLLDyvHX6gA8
Ce4CPdemMNwOLGpc/AfxtF854XdPljwAHum3GxnrvAP4FOAQMdNuMwF3AZ6v+PnwLc74f+Arw/Y33f
6DbZjxv/WHgc902I/UH4z7RuLwSGO/ELFlHwD8N1EopL5ZSXgc+D3y0eYVSyngp5avAdMaAtDbjwVLK6c
a7h4Abu3DGV5veXQxU/ajrnDM2fBq4HzhT5XANrc6YrZU57wEeKqX8H0Ap5X+7cMZmHwf+ppLJvquVG
QtwXePy9wL/04lBsgK8AvjvpvdfaizrJvOd8W5gf0cnmq2lGSPidyPiBeABYFNFs82Yc8aI+Eng3aWUf6xysCa
tfq3XN34cfSIi3l3NaG/SypwfAD4QEc9ExKGIWFPZdHUt328ap+x+GPjnCuZq1sqM24ENEfESsI/6kXrb+SBc
G0TEBmAA+NPsWS6klPJQKeV9wB8CW7PnaRYRPcCfAb+XPcsc/gHoK6V8EHgK2J0z8X0Uj8NMUj96PKv
IuL7Uie6uNuBJ0opZ7MHuYCPA4+WUm4E1gKPDeb5X2yorwMeA5iOlGxvLuklLM0bELcAW4COllO9UNNu
M+e7HzwO/0tGJZptrxncAPwZ8KSLGgZ8Bnqz4gbg592MpZaLp6/swsLqi2Zq18vV+CXiylPJGKeXrwRwNeoB7
kq8/mevJ3qTz9AazPeDfwdQCnl34C3U3+hnvaq8uR30wnuXuBF6j9+zJwE/9GLrPsoOQ/CzTkj8BPUT+a/v
1v3Y/NswC8Do90243nrf4nqH4RrZT++q+nyrwKHuvTrvQbY3bi8jPqP2ku7acbGejcB4zSeDNaF+3E/cFfj8o
9QPwfc9lkr/cTP+wTXUv/f+QVgS2PZH1M/kgT4Ker/m58CJoDnunDGp4ETwOHG25NdOOODwHON+Q5
eKn5ZM563buUBbnE//kljPz7b2I83VT1ji3MG9VM6zwNHgNu7bcbG+9uBz2Tswxb340rgmcbX+zDwi52Y
w6ciS1ISH4STpCQGWJKSGGBJSmKAJSmJAZakJAZYXSEiJju8/U9GxKKqbk9qhQHWteKTwKI515Iq1Js9gH
QxEfE+4CHgeuA0cE8p5WhEPAq8Sv31N24A/qCU8kTjufqfBYaoPwPsDeBzwA823g5GxMullJsb278P+CXg
NeCjpZQTVX5+kkfA6ma7gOFSymrg94GPbPrYu4APUw/oZxrLfo3660ivBO4AfhaglPIX6GxMfKm/NO
ehUsqHqL8O8T0d/UykC/AIWF0pIpYAPwd8ISJmFn9P0yp/X0qZBp6PiOWNZR8GvtBYfjwiDl7iJl4Hvti4PA
bc2rbhpRYZYHWrHuCbpZQfv8jHm195Li6yzqW8Ub77PPyzeF9QAk9BqCuV+l/y+HpE/DpA1H1ojqs9Q/1
F03saR8WDTR/7NvWXvpS6hgFWt1gUES81vX0K+E3g7oh4lvorkc31Z4L2Un8FveeBx4EvA99qfqCnleP
ZcnlePZc0oV43ktXmy82/gTP24BPG191M4+AJSmJ54AlKYkBlqQkBli
SkhhgSUpigCUpyf8DVNl6MH4vQVoAAAAASUVORK5CYII=\n"
        },
        "metadata": {
          "needs_background": "light"
        }
       }
      ]
     },
     {
      "cell_type": "code",
      "source": [
       "data['Length']=np.where(data['Length']<0.23,0.52, data['Length'])\n",
       "sns.boxplot(data['Length'])"
      ],

"metadata": {
"colab": {
"base_uri": "https://localhost:8080/",
"height": 296
},
"id": "uJImMNMqMAmY",
"outputId": "7fd05b42-2cc0-42dd-d8a8-dd82fcd86a5e"
},
"execution_count": 41,
"outputs": [
{
"output_type": "execute_result",
"data": {
"text/plain": [
"<matplotlib.axes._subplots.AxesSubplot at 0x7f39ea259450>"
]
},
"metadata": {},
"execution_count": 41
},
{
"output_type": "display_data",
"data": {
"text/plain": [
"<Figure size 432x288 with 1 Axes>"
],
"image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAKlklEQVR4nO3dXazkd13H8c93d4PsClVha8UFWeFAsBoxsjE+cAF
GTdMoqERTosYmWKORTw6L4L4dXOFgF2ZRDtzWN5cV7Ua2XJ8q83O7CDZb5vnVCyPwmQ7NZ6T2fVLXCjJU6DCzQbpyuUrV
XnxUzjcbPtmfMw8509+3olJ5kz53/OfH/7n3nnf/6zM6fGGAFg+fZ1DwBwpRJggCYCDNBEgAGaCDBAEgAGaCDBAEw
EGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmmzpb8LB
pZw4cSKTyaR7jjLmdOXMmSXLyJHmSf7P2tpa1tfXu8Xu8dgyQSYHZtMJrnn3/8jFw69qqHuUuew/9/kycNP
Mbdf/+5x7pHoMlq3AO57F049KKcf8313WPM5eD9dybJysz7zDxceZwDBmgiwABNBBigiQADNBBF
ggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgz
QRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgz
QRIABmggwQBMBBmiwABNBBigiQADNDmwjBs5c+ZMzp8p8/n/n/PHjy/j5IiyyWSSfU+O7jEuW/u+cPnLuRnb3oEXU/W1WnqurU2bNnNnFzlEwJVo0yPbzJVo0yPbzJVo0yPbzJVo0yPbzJVo0yPbzJVo0yPbzJVo0yPbzJVo0yPbzJVo0yPbzJVo
94fKyoyWSSgwcPLuRnb3oEXFU/W1WnqurU2bNnFzIEwJVo0yPgMcbJJCeT5NixY5y6zDly5EiS5EiS5Oabb97O
t7Pijh8/ntMPPfKZ7jjMvMPfKZ7jjMvWl59/VdZecY3HnxB8mzgEDNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgz
AAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKC
JAAM0EWCAJge6B2Bv2H/usRy8/87mKMeay/9/yjSbIy8+4/91iSa7rHoIEAs2Nra2a2vdvEmTOHPNnP0/7vV6F
1z2f0bsjsEmB1bX1/vHgEuS84884BAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEg
AGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZrUGGP+javOJvn04sN2Jvn04sZZqsNJHukeYYZeadAe0lVnRpjHOueY7dGqzntXtIACaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgz
6PW8fIxx9cVXbinAe0lVnRpjHOueY7dGqzntXwWtR6nIACaCDBAEAkys5wCe7B9hl1rQABN9nyAq+q6vqvqPqppU1a9/V/1P4us/V1X/V/X1X1X1XX1Ho/VmoCbfuJaW9f4f4us/V1X/V/X1X1X1XX1Ho/VmoCbfuJaW9f4f4us/V1X/V/X1X1X1XX1Ho/VmoCbfuJaW9f4f4us/V1X
o6O9s/91TVz3TMOa959k9V/XhV3VdV91bVny97xq2YY//8wY984mq+x6hQ4OxtizH0n2J/lkklckeV6Sjye59qJtrtpw+U1JPtQ9907WM9vuhUn+n+r
6hQ40xtizH0n2J/lkklckeV6Sjye59qJtrtpw+U1JPtQ9907WM9vuhUn+IcndSY51z73D/XNjkvd0z7qL63lVk
o8l+ZrZ51/bPfdO728btl9Pcmv33Dvc/29J8oq3X7XPDvcPyeT/Pzs8rVJHlzkTv9CPg7kkkzGGA+MMc4n+Ys
ALnHbtw/NowzXnXj2GZMT2ZaLWT81mZYB4h+1U9I/MZ4ZUf+/OkPqlkzq/Muk9/u+IIffuw+/jAfTQsnUuvcjvg+gPlm59wdYu8+Hf0E2B8mZNxJ4EouFK2aG9AmeOaSsY5BDtWP/qYj9zgPqCmS3VrodcyNRtZL3tYXMSQA8K2JGIGEOBCg0Bk8f6o4QF1Alu3RtFG

JKj8ruel6Zt6d5HeTfGmZw23DvOu5XMyznpuS3DLG+GySjDH+Z8kzbsVW989bk/zFUibbnnnWM5JcNbv8
VUn+e5ED7fUAH0nyXxs+f2h23f9TVb9QVZ9M8ntJ3rGk2bZj0/VU1bcnedkY42+WOdg2zbV/krxl9uvg7VX
1suWMti3zrOfVSV5dVR+tqrur6rqlTbd18+6fVNXLk3xjkr9fwlzbNc96fjPJT1bVQ0nuzPSofmH2eoDnMsa4
ZYzxyiS/luQ3uufZrqral+T3k7yre5Zd9NdJjo4xvjXJ3yV5X/M8O3Ug09MQb8j0iPGPq+qrWyfaHTckuX2Mc
aF7kB16a5L3jjFemuT6JH86e1wtxF4P8JkkG4+YXjq77tncluSHFzrRzmy2nhcm+ZYkH6mqB5N8Z5I7VviJuE
33zxjj0THGE7NP/yTJ65Y023bMc397KMkdY4ynxhifSvKJTIO8irby+Lkhq336IZlvPW9L8v4kGWP8U5LnZ/p
GPYvRfWJ8wSfdDyR5INNfjZ456f7NF23zqg2XfyjJqe65d7Kei7b/SFb7Sbh59s9LNlz+kSR3d8+9w/Vcl+R9s
8uHM/2V+MXds+/k/pbkNUkezOyFXav6Mef++dskN84uf1Om54AXtq4D2+z2ZWGM8XRVvT3JhzN9BvT
WMca9VfVbmYb2jiRvr6rvS/JUks8m+em+iZ/bnOu5bMy5nndU1ZuSPJ3ksUz/V8RKmnM9H07yA1V1X5I
LSX5ljPFo39TPbgv3txuS3DZm1VpVc67nXZmeFvrFTJ+Qu3GR6/JSZIAme/0cMMDKEmCAJgIM0ESAAZoI
MEATAWYlVNUXF/zz31lVh5Z1ezAPAeZK8c4khzbdCpZoT78Qg8tbVb0yyS1Jrk5yLslNY4z7q+q9SR5PcizJ1
yX51THG7bPX7L8nyfdm+gqzp5LcmuTrZx93VdUjY4w3zn7+byf5wSTnk5PGZZa4PHAGzyk4mWR9jvC
7JLyf5ow1fe0mS12ca0N+ZXfejSY5m+j6uP5Xku5JkjPGHmb6k9I3PxDfTtx69e4zx2kzfO/mmha4ELsERMC
upql6Q5LuTfKCqnrn6KzZs8ldjjC8nua+qrpld9/okH5hd/kfwOLp9O8v27NjzMSYBZVfuSfG6
M8W3P8vUnNlyuZ9nmuTy14TX+F+KxQAOnIFhJY/qXSj5VVT+WJDX12k2+7aOZvnn7vtlR8Rs2fO0Lmb5d
J6wMAWZVHKqqhzZ8/FKSn0jytn/mfK/rLtN974kf5bkGX5J8fva1vLvxhjfL
GqXpzkn5N8zxjj4e654FKc92Kv+eDsT/w8L8m7xZdV5ggYoIlzwABNBBigiQADNBFggCYCDNDkfwEErWnjr
e3frgAAAABJRU5ErkJggg==\n"
        },
        "metadata": {
          "needs_background": "light"
        }
       }
      ]
     },
     {
      "cell_type": "code",
      "source": [
       "sns.boxplot(data['Height'])"
      ],
      "metadata": {
       "colab": {
        "base_uri": "https://localhost:8080/",
        "height": 296
       },
       "id": "Es7JGGAEMAxo",
       "outputId": "52ce2268-5dd3-4adc-9ba2-c1cc723dfacd"
      },
      "execution_count": 42,
      "outputs": [
       {
        "output_type": "execute_result",
        "data": {
         "text/plain": [
          "<matplotlib.axes._subplots.AxesSubplot at 0x7f39ea1b0e50>"
         ]
        },
        "metadata": {},
        "execution_count": 42
       },
       {
        "output_type": "display_data",
        "data": {
         "text/plain": [
          "<Figure size 432x288 with 1 Axes>"
         ],

"image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAANEElEQVR4nO3df2zcdR3H8de/Ch+GTTz3msSUv
Pi9J2vfv7pr7n2vKbAAWt44PsCQdPvlUvfS2i4+5/6THt0vSMY8dvR8AGolzwABgQoABwIQAA4AJQYAEw
IMACYEGABMCDAAhwABgQoABwIQAA4AJQYAEwIMACYEGABMCDAAmBBgADAhwABgQoABwIQAA4AJQYAEw
IMACYEGABMCDAAmBBgADAhwABgQoABwIQAA4AJQYAEwIMACYEGABMCDAAmBBgADAhwABgQoABwIQAA4AJQYAEwIMACYEGABMCDA
AmBBgADAhwABgQoABwIQAA4AJQYAEwIMACYEGABMCDAAmBBgADAhwABg0nIBHhkZ0cjIiHuMwn
XqugAsXLd7gFrlctk9QkN06roALFzLHQEDwGJBgAHAhAADgAkBBgATAgwAJgQYAEwIMACYEGAAMCHA
AGBCgAHAhAADgAkBBgATAgwAJgQYAEwIMACYEGAAMCHAAGBCgAHAhAADgAkBBgATAgwAJgQYAE
wIMACYEGAAMCHAAGBCgAHAhAADgAkBBgATAgwAJgQYAEwIMACYEGAAMCHAAGBCgAHAhAADgAk
BBgATAgwAJgQYAEyaEuByuaxLLrlE5XJZExMTuv7669Xf36/+/n7ddtttWrNmzdTl6aefbsZINmNjY7rwwgu
1a9cu9ygtaWJiQuvWrdPExIR7FEBSY/fJpgR4eHhYBw8e1PDwsEZHR1Uul3Xo0CEdOnRId9xxx4xt9+3b14
yRbDZu3KgjR45ow4YN7lFa0ujoqMbHx7V161b3KICkxu6TDQ9wuVzWnj17JEl79uzR3XffPedzOvUo+IUX
XtCBAwckSQcOHOAouMbExIR27NihzNSOHTs4CoZdo/fJ7kI/2iyGh4dn3D5y5Micz9m3b5/Wr19fyOcvl8v
q+k/O6zldh15QufyvwmY4OsfBgwdn3Ldhw4a6/kNaLEZHR6f2j8OHD2vr1q26+eabzVNhMWv0PjnnEXBE
fClixiJibP/+/fP+BEePfnGso0fDqLjvvvs0OTkpSZqcnNS9995rngiLXaP3yTmPgDNzi6QtktTX1ze/Q0lJvb29C
4rwpk2b5v2c2axfv167npzfKY0jS5erdMbKwmY4Osf4+PiM7wCWLVtW2MfvBGvXrtX27ds1OTmp7u5uX
XTRRe6RsMg1ep9s+DngoaGhmZ+wa+5PefrppzdqHKvVq1fPuH3rrbeaJmlNAwMDU/vHkiVLdM0115gn
wmLX6H2y4QEulUrq7e2VVDkavvTSS+d8zsqVKxs8lcfy5cunjnqXLVum888/zxRa+np6VF/f78iQv39/erp6
XGPhEWu0ftkU16GNjQ0pFNOOUVDQ0MaGBhQaVTS0qVLtXTpUl199dUztu3Uo9+jNm7cqK6uLo5+j2N
gYEDnnnsuR79oGY3cJxv+KgipchR8zz33TN2+/fbbZzx+ww03TF0v8pUHraivr0/333+/e4yW1dPTo82bN7v
HAKY0cp/kV5EBwIQAA4AJQYAEwIMACYEGABMCDAAmBBgADAhwABgQoABwIQAA4AJQYAEwIMACYEGABMCDAAmBBgADAhwABgQoABwIQAA4AJQYAEwIMA
CYEGABMCDAAmBBgADAhwABgQoABwIQAA4AJQYAEwIMACYEGABMCDAAmBBgADAhwABgQoABwIQAA4AJQYAEwIMACYEGABMCDAAmBBgADAhwABgQoABwIQAA4AJQYAEwIMACYEGABMCDAAmHS7B6hVKpXxKeNRsCa0q7y4nSWslnTPtraOXR8Symue/R9KHq9e/l+mL0x7
7dWY+Vf24uyX1SvpFkcMD80WA0S66JF2QmTPeGH4e7+U//R3qDot9Hy2Ac8BoFz/VtDcYj4jzZtlmp6Qr

qtevrPPj/kuVt94Emo4Ao12sk9RX/cOMj6nyjlm1bpJ0S0Q8Iqmkyl9bmcsWSTv4IRwceDc0dIzq63lfysyMi
CslXZWZs/2dO6AlcB4MneR8SV+t/pHXf0r6uHke4GVxBAwAJpwDBgATAgwAJgQYAEwIMACYEGAAMPkf
hKf7PRcSLS4AAAAASUVORK5CYII=\n"
        },
        "metadata": {
          "needs_background": "light"
        }
      }
     ]
    },
    {
     "cell_type": "code",
     "source": [
      "data['Height']=np.where(data['Height']<0.04,0.139, data['Height'])\n",
      "data['Height']=np.where(data['Height']>0.23,0.139, data['Height'])\n",
      "sns.boxplot(data['Height'])"
     ],
     "metadata": {
      "colab": {
        "base_uri": "https://localhost:8080/",
        "height": 296
      },
      "id": "PjPwEJ67MA55",
      "outputId": "8f18eef3-c157-4e68-b9f1-e76d402b0c80"
     },
     "execution_count": 43,
     "outputs": [
      {
        "output_type": "execute_result",
        "data": {
          "text/plain": [
            "<matplotlib.axes._subplots.AxesSubplot at 0x7f39ea1a2e50>"
          ]
        },
        "metadata": {},
        "execution_count": 43
      },
      {
        "output_type": "display_data",
        "data": {
          "text/plain": [
            "<Figure size 432x288 with 1 Axes>"
          ],
          "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAMV0lEQVR4nO3db4xld13H8c+3Xekfa6W1tcGtsC0rQUhNGxZEC
YYqidhEILGRIhhQEgOYpU2fqQW7WPoHK50WiioRRBj0iioiMUE44q7WPoHK50WiV0q9o9gsdtC258
P7tn2Mp3Z7e7M3O/M9vVKJnvnnHvP/e65Z99z59ydOzXZXGCCACLd1L3AAdPVM0ESAAZoIMEATAQZos
u1YrnzOOeeMHTt2bNAoACemAwcOPDHf58mK8I4dO7J///71Wrr4mwcAVgcmsLBRQUrWlrzyMU4v2rMqq63T
ot+vM9vdjYwm2bUvWrYAZ7kcgQTjbJnDrCeRmWWPbjW0VlsY7I2IhSvCIKaMBRO+bSCaQJnjRQuy/yPN7
pIJ7gb52PWiAHF6ufxA/tgt3xgrhbYAIUnBsakSB4CqN/kuD+Z1OnaZw1trGcbv1+eZFoVTDaTJwkB6X+
xKVp2cOG2hdaHKdc2dWAL6/CTfNKJ9c3S6mlS1Pp0CXB5lEg3NrOlc+1fPYJGg3J0g9swLFNMsn0O7...
Ee+mST5r8c25+F+8iMPdY9Ak815RLLlPHH62Tn00su6x1jRaXd+Mkk2/Xw89zgHDNBEgAGaCDBAEwEGa
CLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRYIAmAgzQRIABmggwQBMBB
mgiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATA
QZoIsAATQQYoIkAAzQRYIAmAgzQZCEB3rt3b/bu3buIuwJY/vlFARAEwEGa
CLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBB

mgiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATA
QZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQJNti7iTgwcP5tChQ7nyyisXcXcs2NLSUk769ugeY8s66dH/
zdLSw/59bFJLS0s57bTTNmTbR30GXFW/VlX7q2r//fffvyFDADwXHfUZ8Bjj+iTXJ8muXbuO62nO9u3bkyR
79uw5npuzyV155ZU5cM/Xu8fYsp489czsvPA8/z42qY38zsQ5YIAmAgzQRIABmggwQBMBBmgiwABNBBi
giQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQY
oIkAAzQRYIAmAgzQRIABmggwQBMBBmgiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EG
KCJAAM0EWCAJgIM0GTbIu5k586di7gbgHW3kf1aSIB37969iLsBWHcb2S+nIACaCDBAEwEGaCLAAE0EG
KCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmgiwABNB
BigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQ
QYoIkAAzQRYIAmAgzQZFv3AJwYTn7koZx25ye7x1jRyY88mCSbeL6HkpzXPQNBJg127lzC3Jk
u3bN2vkztv0+5CNIcCs2e7du7tHgC3JOWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRI
ABmggwQBMBBmgiwABNBBigiQADNBFggCYCDNBEgAGaCDBAkxpjPPsrV92f5KsbN84RnZPkgab7fjfMtz
bmWxvzrc1Gz/eiMca5yxceU4BPkP8UWv4yceU4A7VdX+Mcau7jlWY761Md/amG9tuuZzCgKgiQADNNlKAb6+e4CjMN/am
G9tzLc2LfNtmXPAACearfQMGOCEIsAATVoCXFVvqKp/r6qlqvrNFdafUlUfm9b/c1XtmJbvqKpDVDVXXL9HH
d3G1eUVW3Tbf5UFVVw3xvm5vtlqp6sqountZ9dtrm4XU/uIHz/VRVfaGqHq+qy5ete0dV3TV9vGNu+SL3
34rzVdXFVfVPVXVHVd1aVW+ZW3dDVX1lbv9dfLzzrWXGad0Tc3PcNLf8gul4WJqOj+ctcraqunTZ8fdoVb1
5Wrfo/Xd1VX1pehw/U1Uvmlu3GY7BFedb5DGYJBljLPQjyclJ7k5yYZLnJflikpctu857k1w3Xb4iycemyzuS3
L7Kdj+f5NVJKsmnkvzcoudbdp2Lktw99Xb4iycemyzuS3
L7Kdj+f5NVJKsmnkvzcoudbdp2Lktw99/lnk+xa0P7bkeTHknwkyeVzy89Ocs/051nT5bMa9t9q870kyY9Ml
38oyX1Jnj99fsP8dbv24bTuW6ts9+NJrpguX5fkPP1veLMcg6vNt5Bj8PBHxzP
gVyVZGmPcM8b4dpI/TfKmZdd5U5I/nC5/lsnPHOmrYVW9IMmZY4x9x9Y7anPpLkzc3zvXW67Xo76nxjjP8Y
Y9ya5Mllt/3ZJJ8eYzw0xvifJJ9O0ozF77/V5htjcmMcdd0+WtJ/jvJM356aB2sZR+uaHr8fzqz4yGZHR/Hsw
/Xa7bLk3xqjPHIccywHjPePHff+5KcP13eLMfgivMt8BhM0nMKYnuS/5z7/N5p2YrXGWM8keR/kyKa1ebVsW5JN5gWnd
BVf1rVf1DVb127vr3HmWbi5rvsLck+eiyZR+evnX57TV8e/Vs5jvW2y56/x1VVb0qs2cvd88t/r3p28IPVNUp
xznfesx4alXtr6p9h7/Fz+zx/8Z0PBzPNtdOuyDOPv679967MntEe6badx+D8fE/Z4GMwydZ7Ee6+JC8cY
1yS5OokN1bVmc0zPUN/XiSR8Y8tftsY46j0jgcuCPtdZqmTvdTNmWX59KRJ7G+aTQAGsiGX9eeHMf1m4s8O7n6OlaHyVXGDfSg
q5/V5JfSvLBqnqnx4x/4yzPMO2/i5L8zdzilv1XVR+MAkvHX7t0kyl5Ml8
xiPjTEeTJIxxoHMvjK9ZLr++XO3X2mbGz7f3Pp7nPPsYYYxyc/nw4yY2ZfZu0UfMd620Xvf9WNX1B/ask14wx9
h1ePsa4b4b8w8lUTOf79t+t+YZ5x7LezI7t39JZo//86fj4Zi3uV6zTX4xyV+MM/PC919VvT7JNUneOnvk
W678GNwlfkWdQw+tdGFfiTZltmJ9wvy9Anyly+7+zq/nu/nu1/k+vh0+dwkJ0+XL5L5x26tlj5RP4ly16vunzk6a5Lly
2zXOmy9+T2XnCd2/UfHPXvSHPFBHuK5m9+HHWdHnh++8I8z0vyWeSXLXCdV8w/VlJPjPZL7cxW7cl
nDJdPifjfJXZle4EnyZ/nuF+Heu8jZ5pbvS3Jp5/7L7IvsgMfjUNte6gePcQZcl+fK0A66ZlvlOZl
+JkuTU6WBemh6UC6flv5DkjiS3JPlCkp+f2+AuJLdP27w7w/0/LXK+ad3a3T/HsyfSHZoPlem
dl5r//L7JnZHXO3/dVp7qXMvr3q2H8rzpfk7Um+Mz2+hz8untbjT05zfHH6811z
27xwOh6WpuPjlIbHd0dmTwBOWrbNRe+/v0vy9bnH+aZl9uiN6eEkvghhCDBAEwE
GaCLAAE0EGKCJALNpVNW3pZ+zqq69ii+3eeeNK73a17Dqvq6q6q/XGxY7YxbxhjvX8Mx
mrkoiwLQQYLaEqjqjqr6P7qvl5ErB5ZyhzXgvmfEzDRxyDO7I86+zjIQ1+jNNp8rfXfaM+oyqkRV3VlVfz1z
nFWdvkNm4FZG0r7yPCuSbKR8+WfGlKE/5R8sUpVfWG4fGpbaSMnatuCVSmeKzm1O7MnMMRaHTLp9WUTCeDenkWuvLn1XYuMRqNVjmG5ih
WOMD1XV1Zn92O4D6ZoOqk6g/XVZwXl6rQzAiD5W/zUS0deXIkejdc+8Q4RiS7KqMf5N73oYmTFYs2LVtyGaKkRTNUlRD5Mt/EBZlXuOE8
R/Mrfv8GOPeabu3ZPYju59bz+HhWAkwW8VJSV49xnh0fuExvK3yY3OXn4hjn03AOWC2ir9NsvvwJ6v8Pq
59mb1hUzJ7l7pn4+Ek37e20eD4CDBbxfuS7S7Jp+G8GXkiw/x5vM/kfD1VV1a5Kdmf2mkqQO5PslfexGODt4N
jRPG9P95D40xRlVdkeStY4zlv88PNg3nwTiRvCLtdPv2/tGZu87C5uWZ8AATZwDBmiwiABNBBigiQADNB
FggCb/D9d7GBrBFcCyAAAAAElFTkSuQmCC\n"
        },
        "metadata": {
          "needs_background": "light"
        }
      }
    ]
   },
   {
    "cell_type": "code",
    "source": [
     "sns.boxplot(data['Whole weight'])"
    ],
    "metadata": {
     "colab": {
      "base_uri": "https://localhost:8080/",

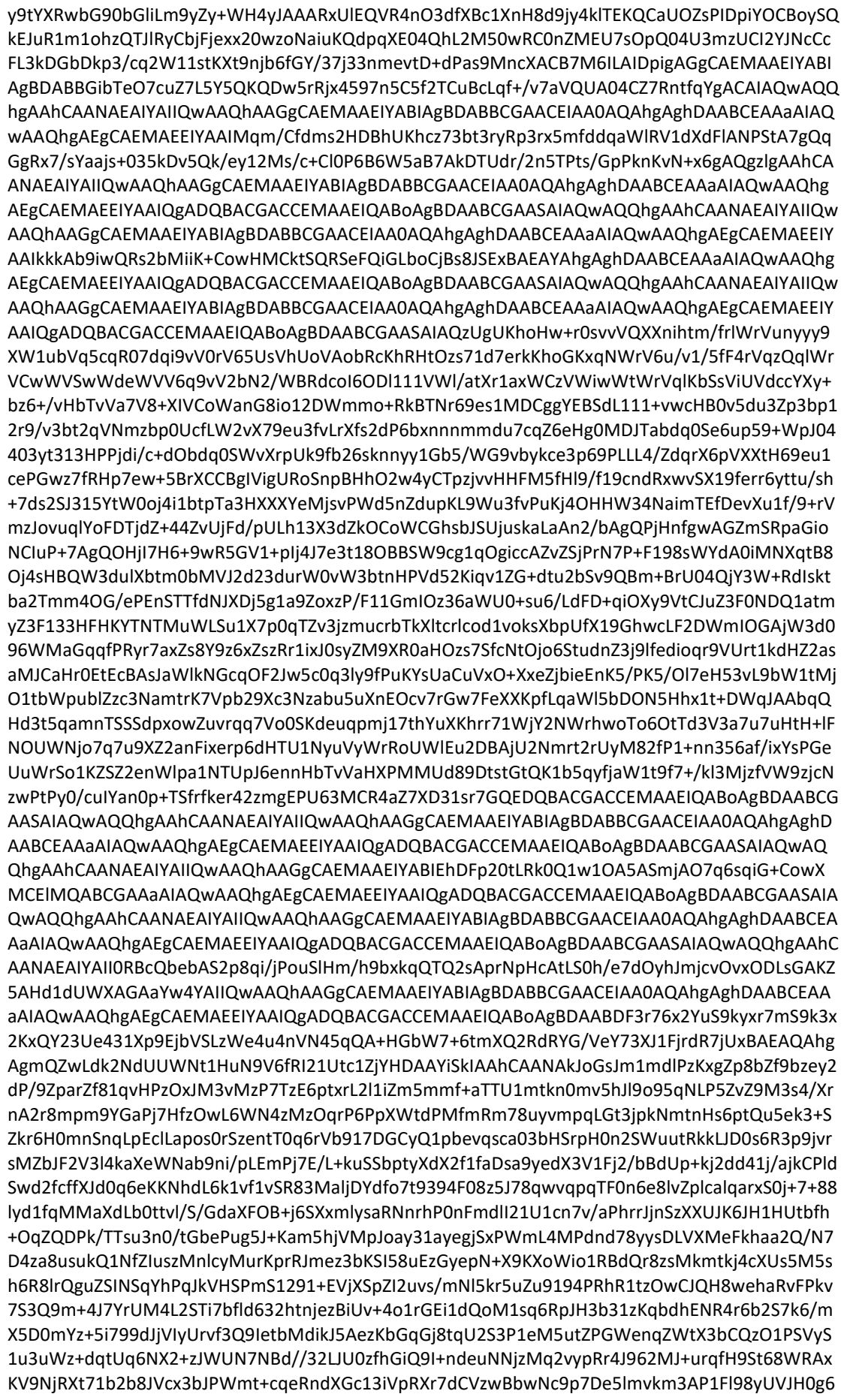
"height": 296
},
"id": "pGYnd-9jMBGJ",
"outputId": "afac1751-41fe-4cd6-9e9d-0126677e3881"
},
"execution_count": 44,
"outputs": [
{
"output_type": "execute_result",
"data": {
"text/plain": [
"<matplotlib.axes._subplots.AxesSubplot at 0x7f39ea106ad0>"
]
},
"metadata": {},
"execution_count": 44
},
{
"output_type": "display_data",
"data": {
"text/plain": [
"<Figure size 432x288 with 1 Axes>"
],
"image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAPTElEQVR4nO3dYWxV93nH8d+D7RAnLOsKmdd5NDfsEmWuWL
eEVQlRp6KSBYcpmUSlpdIIEVoZTOQ7YmtHnRdR1HWxp66r2k4baQwdnNSJiWrydI6WrydI6JR
ROiStCu4SYlUBwqQ3PXpyDMfa177nm+j6+5vuRLF3fe+7//P++8TeHc+1jc3cBAGpvQfQEAOBqRYABIAgB
BoAgBBBgAghBgAAjSWMnGS5Ys8UKhEMEtTAYD56cCBA++++4+40T768owIVCQf39/dWbFQBcczsh6Xu5xQ
EAAQhwAAQhAADQBACDABBBCDAABCHAABCEAANAEAIMAAEIcAAEIQAA0AQAgwAAQhAADQBACDABBBCDAABCHAABCEAANAkIr+JtzVqLu7W0xRE+jpOPHj0uSWltbbg2cyWbfFYVEdxW4qcHBDQw
8PDOnr0qA4ePKiuri4dPnx40vjTjZNnf+WeM5Nx8iLAEoaGRkpe9T3Tf+e1b5b4zqMRZkaPGjatQ4NDWnr1q3atG
mT2tvb9vbBD2nr1q1KkkSPPPGnGyfP/so9eM5Nx8iLAAEoaGRkpe9T33HPPaffu3XJ3DQ4Ojt0/ODDioJEmUJ
MnY/WfOnJG7a8+ePVOOOzQ0pD179R8pR8rNT4U7k4Trn9lXvOTMapRGNVR5vC8ePHNTw8rO3bt9did1
WVJIkW/Myjp1FXFvz0XSXJ6bp8vXHJ4cOHy24OjojqoqMyv52FRHqefPn1dvb68effTRSY/19PRoz7rdbsp
rr0zDPPlHysp6cKLLu/cs9x94rHqUtZUzbIPkldpppCL0rOzUFN/4d3cpt1PfTRSY/19PRoZGQk1/y6u
rr0zDPPlHysp6dHFy5cKLu/cs9x94rHqUTZI2Aze8TM+s2s/8SJE/8SJE1XbMYC5bXR0Nd27qQUPUAYHBy87ah0/
7t69e0s+Z9++fbt29s/tPtr9xzZjJ0JOcoeAbv705bJ0VM4JVVkCm5S9AWBy7f9f9GiRoZ0De
DoW9HTqCsXrr1BxWUtdfl645L169fn+ie3mZWFMZqFQkDQ2Njbr77rtHaYBW
Po6Oi0+yv3HHeveJxKcA4YQEktLS1lt2lsFRjY+njuM7OTnV2dk6U66+v6fv6fn1dvb68effTRSY/19PRoZGQk1/y6u
rr0zDPPlHysp6dHFy5cKLu/cs9x94rHqUTZI2Aze8TM+s2s/8SJE1XbMYC5bXR0NNd27qQUPUAYHBy87ah0/
7t69e0s+Z9++fVOOV2r8qezbt29s/tPtr9xzZjJ0JOcoeAbv705KelqSVK1fO6FCwtbVVkrRz586ZPD3U9u3bde
DoW9HTqCsXrr1BxWUtdfl645L169fn+ie3mZWMZqFQkDQ2Njbr77rtHaYBW
Po6Oi0+yv3HHeveJxKcA4YQEktLS1lt2lsFRjY+njuM7OTnV2dk66v6v6GhQQ8++++GDJ52zcuFFNTU255ldq7P
HjLFiwoOz+yj1nJuUggADKKmpqUmLFy/edpt169bp3Nlr4+ZYhkPqm9yHU9+4LTSyKzlT5YLMxYRkRBo7L
Swm0iW2jsy7/kq9wwmgVaVyodmWoMh+xjH5jvQoW9ohp1E0uqQFkAdkUgVVxzRIV3+ZY3FmjlaU+/cm2/nsY+
xFy9erLVr15Z8Z8rNT4U7k4Trn9lXvOTMapBAEGMKWWlhYVi0UMtZxeZTGRpZy0cY5dNHvCfgWv4K3+NEVNzs5YVvXz52lLhixQp
1dnZq+fLlam5uzfznuvuzotLOzU9dff72eeeaZ8vrVu1Cc/jMk/Ww8cwpgZbyqJ9ZdlJ94+h59Hp95prLk+ex9ZMTDy9+nnW
AAkPcUfWlmRi/vmvn8fcDUG6+nHrlnYY3cZJmfGAEEGBjGNjjjc
0715jZAXdfOfF+joABIAgBBoAgBBBgAghBgAAhCgAEgCgAEgCEGCAEGACEKAASAIAQaAIAQaAIAQYAIIAQaAIAQaAIAQaAIAQaAIAQaAII
IQoABIAgBBoAgBBBgAghBgAAhCgAEgCAEGCAEGCAEgCEGCAEGACEKAASAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQa
gBBgAghBgAAhCgAEgCAEGCAEGCAEgCEGCAEGACEKAASAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAIAQaAgjbXYSbFYrMV

uAFQR37ezryYB7ujoqMVuAFQR37ezj1MQABCEAANAEAIMAEEIMAAEIcAAEIQAA0AQAgwAQQgwAAQ
hwAAQhAADQBACDABBCDAABCHAABCEAANAEAIMAEEIMAAEIcAAEIQAA0AQAgwAQQgwAAQhwAAQ
hAADQBACDABBCDAABCHAABCEAANAEAIMAEEIMAAEIcAAEIQAA0AQAgwAQQgwAAQhwAAQhAADQ
BACDABBCDAABCHAABCEAANAEAIMAEEIMAAEaYyeQD1oOHtSzYf6oqcxScPZIUmac3NrOHtSUkv0NIA5
jwCXUSwWo6cwpePHRyVJra1zLXYtc/rrBswVBLiMjo6O6CkAmKc4BwwAQQgwAAQhwAAQhAADQBAC
DABBCDAABCHAABCEAANAEAIMAEEIMAAEIcAAEIQAA0AQAgwAQQgwAAQhwAAQhAADQBACDABBC
DAABCHAABCEAANAEHP3/BubnZD0wxnua4mkd2b43LlsPq5rPq5JYl31Zj6t6yZ3v3HinRUF+EqYWb+7r6z
JzmpoPq5rPq5JYl31Zr6uazxOQQBAEAIMAEFqGeCna7ivWpqP65qPa5JYV72Zr+saU7NzwACAy3EKAgCC
EGAACFLVAJvZWjP7vpklZvZnJR5faGZfyh5/2cwK1dz/bMmxrk1mdsLMXs0+Ho6YZ6XM7PNm9raZvTbF4
2Zmn83W/V0zu63Wc5yJHOv6mJmdGvd6/UWt51gpM1tqZs+b2UEz+56ZbS+xTd29XjnXVXevV27uXpUP
SQ2SfiBpmaRrJH1HUtuEbbZKeiq7/YCkL1Vr/7P1kXNdmyQ9GT3XGazttXkdJm1KR6/V9JuSSbpDkkvR8+
5Suv6mKSvRc+zwjV9QNJt2e2fk3S4xH+Hdfd65VxX3b1eeT+qeQT8EUmJux91959JkJux91959J+mdJ90/Y5n5JPdntr0j
6uJlZFecwG/Ksqy65+wuSTk6zyf2Sej21X9L7zOwDtZndzOVYV91x9x+7+yvZ7dOSXpfUOmGzunu9cq5r3q
pmgFslHRv3+Zua/IUc28bdWdkrS4inOYDXnWJUnrs3/2fcXMltZmarMu79rr0Z1m9h0z221mH4qeTCW
yU3e/KenlCQ/V9es1zbqbqkOn69psObcNXxrKSCu/+6pL26dJSPuekVpb+b/2FJ3ZL+NXg+uZnZIklflbTD3d+N
nk+1lFlX3b5e5VQzwMcllcb3b5e5VQzwMcljT/y+5XsvpLbmFmjpJ+XNFTFOcyGsuty9yF3P5d9+jlJt9dobrMtz2tad9z9z9XXc/k93
uk9RkZkuCp1WWmTUpjdQX3P1fSmxSl69XuXXV6+uVRzUD/G1Jy7UsmbLsmbLNL0sbs9ick/Ydn
Z9nnsLLrmnCe7T6l57Hmg12SHszeXb9D0il3/3H0pK6Umf3SxfcezOwjOwjSr8P5vSBQDbfv5f0urt/eorN6u71
rOueny98mqs1kDuPmpmfyzp60p/cuDz7v49M/tLSF3eP7GAhFeBrZEKmNkXlb7DkVtLM/TUKmSXL3pyT1KX1nPZF0VtLmmJlWJse6PiHpU2Y2KmbM
7NXsvj+X9EGprl7EGprl+vPOuqx9crF34VGQCC8CYcAAQhwAAQhAADQBACDABBCDAABCHAuCJm9hkz2zHu86+b2efGff7fzex/jDFs
+b2efGff63ZvZYdkWrr1U49n+a2az/UUYzu6/UVe4mbDPl/M1sh5ldNzuzw3xGgHGlXpXkpoS1bm9ZvD3tB0kczdUUrr36/b/XrsSkBUPxm
+uvRr7bhYQZZqUx5HGmymmzDAFsnuDEEOmbT8IlSPmsMXwcgpBNlP/
/nf1V0l6KWBeubn7Lnf/6ysYYockAoyKEWBcqZck3Znd/pCk1ySdNrNfMLOFkn5N6/6ySKi7GJFh8zsC+N
+u+njZvY/ZjaQXct34cSdmNnvmNm3zOwVM/tydu2A8Y//4DM7vOzG40s6+a2bez
j7uyxzeZ2ZPZ7V81s/3ZXLrM7My43Uyav5ltk/TLkp43mc9nYIA44q4+48kjWaxWyXpW0qvZnWnpJ
WSBrLLeEpla52SGpTen3lu8zsWknPSPp9d1+h9LczPzV+H9nv/XdKWuPut0m8t0kezb
T5qZjdJetvdz0raKekz7v5bktYrvW7HRDsl7czm8uaExybN392f0dqgsbmXNHRcCdGCxe4qFKs6W2FffeSFzSfpWWy+d+0I9G1hJJ33x6BIjE
NKL4G4SunlRl8ct91/u/ubkpT92mlB0mlJb7j74WybHl/JOnvxj3vDqXRezE7aL5GaehLzeMupRdk/ytJa5V
enPwb2eNrJLXpUtQ3zDxSFrp/zh+L7v9T5L+psz8v1liHkAuBBjVcPE88O88Aq1pyCOSfoTSe9K+odx250bzN
v/3Z5L2uvsny2z3gtKjk/sk/sk/ZukP5Xkkp7Xkp7LHl8g8g6Q53/+u88
/3Z5L2uvsny2z3gtKj35sk/ZukP5Xkkp7LHl8g6Q53/+llg+f/mwAznT9QEqcgUA0vSfpdSSfd/by7n5T0PqV
Hk+XegPu+pIKZFbPPPN0j6rwnb7Fb7Fd6uqIoSWZ2vZndnKmsb0j6oZ9PPz0DoBNVZVKGnFn3C2+0Ju1mNkbwHbnaAnaZVn9z/yAsgj3atLR6n/Lqnj4sZm9hsIxtiv9
PSElP9iUaeV/jkdoCIEGNUwoPSnH16a8GNV+Uu78z8ROZo9HNkr5sZgh6asI2J5ReYe6LZvZdpacfdzJadfbi0x1q
DSo+UXsru+Kekn7v5/2efbJK209C+XHJT0hyWmtEPSY9l+ikpPNGcC7Od5h93dzewB
SZ9093nxwAOC7Jc7ZKezH5E7ieSHgqeD+YxjoD+YxjoABIAjngAEgCAEGgCAEGACACCEGACACACCEKAASDI/wMB5
E0eUUr1mQAAAABJRU5ErkJggg==\n"
        },
        "metadata": {
          "needs_background": "light"
        }
      }
    ]
  },
  {
   "cell_type": "code",
   "source": [
    "data['Whole weight']=np.where(data['Whole weight']>0.9,0.82, data['Whole weight'])\n",
    "sns.boxplot(data['Whole weight'])"
   ],
   "metadata": {
    "colab": {
     "base_uri": "https://localhost:8080/",
     "height": 296
    },
    "id": "Sz5l6vfsMLdh",
    "outputId": "62140f14-aaea-4986-91ab-ac8a077fd021"
   },
   "execution_count": 45,

"outputs": [
{
"output_type": "execute_result",
"data": {
"text/plain": [
"<matplotlib.axes._subplots.AxesSubplot at 0x7f39ea078950>"
]
},
"metadata": {},
"execution_count": 45
},
{
"output_type": "display_data",
"data": {
"text/plain": [
"<Figure size 432x288 with 1 Axes>"
],
"image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAMAUlEQVR4nO3df6zdd13H8dd7a8Y2xxToWGKBVbwsMFgUrGZ
sQVm2mGUxwwSjLJlxSjBOLVtmjCb6h1FjNIpYiwkuqBAjyA8TXXQ6jQ4H+4F0MBiMgZcxZCW6bnVjpgPc9
vGPc+puby/0tD33vNvbxyO5yfnxvef7zqenz377vfd+b40xAsDindQ9AMCJSoABmggwBMBBmgiwABNN
h3Oxps3bx5bt25dp1EANqa77rrr4THWasfP6wAb926Nbt27ZrfVAAngKr4lqPOwUB0ESAAZoIMEAToIMEATAQ
ZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmgiwABNBBigiQADNBFggCYCDNBEgAGaCDBAk8P
6nXBwrNi5c2eWl5e7x2Ad7d69O9O0myZcuWNZ9fWlrK9u3bFznS3Akwx6Xl5eXc/anXc/anP5KnTn9s9Cuvk5H2PJ
Un+82sHZ+rkfXsXPc66EGCOW0+d/tw88dLLLu8dgnZx2301Jsuaf8f7njnfOAQM0EWCAJgIM0ESAAZoIME
ATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmgiwABNBBigiQADNBFggCYCDNBEgAGaCDB
AEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggw
QBMBBmgiwABNBBigiQADNFlIgHfu3JmdO3cuYlcAc7We/dq0Lq+6yvLy8iJ2AzB369kvpyAAmggwQBMB
BmgiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATA
QZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmgiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEw
EGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZpsWsROdu/enaeeeio7duxYxO5gXS0vL+ekb41uMdgATvrG
41lefuKEfW8sLy/ntNNOW5fXPuQRcFX9YlXtqqpde/bsWZchAE5EhzwCHmPckOSGJNm2bdsRHRps2bIl
SbJjx44j+XQ4puzYsSN33f+f3WOwATx96plZevHZJ+x7Yz2P/J0DBmgiwABNBBigiQADNBFggCYCDNBEgAGaC
DBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggw
QBMBBmgiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATA
QZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmgiyqXsAOFIn79ub0+67qXsM1snJ+BkjkX/jE/etzfJ2
Qn2gmVmjP3n9xfS4/v7gh79f8TRdTbHsG9SRVzy0OMkYDXFO...

VmjP3hDvAQHmuLR9+/buEeCoOQcM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQ
BMBBmgiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaFJjjNk3rtqT5ItHsJ/NSR4+gs9bNHPOlznn
6/iYNZkfM07zwuHGOctWJcYM2DqNqDd7tdR/GdWbjQ5/mD+8SKVI0GvO+H8IMudEHJ9rd8sd37xl9jc...

```
Rvh4M2PIgM08ZNwAE0EGKCJAAM0EWCAJgIM0ESAOSpV9daqum7F/Zur6h0r7r9letW311bV3x7ma39
wET+IUVVXfLOrs023+YbzV9V1VXX6+kzHRibAHK3bklyY/P+PE29O8vIVz1+Y5PaGuWY2xrhxjPHbR/ES1y
URYA6bAHO0bk/y6untlyf5VJLHq+o5VfWsJC9L8rHp82dU1Qeq6r6q+ov9V8Krqkum13m9p6r+dPp5B6iq
H6yqO6rqY1X1/qo6Y9Xzz6+qu6a3v2t6PeEXTe9/vqpOr6qzquqvquqj04+Lps9fXVVvm97+zunFb+6pqt+s
qv9ZsZuD5q+qNyf59iS3VNUt81lSThQCzFEZY3w5yZPT2F2Y5I4kH8kkytuS3DO9xGCSvDKTo8XzMrn260V
VdWqSdyb5sTHG+ZlchOaalfuY/ijurya5dIzxqiS7MvlJypVzPJTk1Ko6M8lrptu8piYXuX9oetnPHUneOsb43i
SvT/KOHGxHkh3TWR5c9dxB848x/jCTSyNePMa4eLZVgwlXQ2Mebs8kvhdmckWzLdPbj2VyimK/fxtjPJgk
VXV3kq1JHk/yhTHG56bbvCvJzyX5gxWfd0Em0bttetB8SiahX2uOi5J8f5LfSnJZkkryoenzlyY5b8UlqM9cfSS
dyT8cPzy9/e4kv3eI+T+8xhwwEwFmHvafBz4/k1MQX8rkZ/e/kuTPVmy38mpvT2X2918l+acxxpWH2O7
WTI5+z0nyN0l+KZMLee+/vvBJSS4YYxxwsffD+J0ARzo/rMkpCObh9iQ/lGTvGOOpMcbeJN+WydHkob4A9
9kkW6tqaXr/x5P866pt7szkdMVSklTVt1TVuWu81oeSXJXk36fXid2b5PI8c5T6j1lxIe+q+u41XuPOTE5PJJO
rcs3i8UwupwmHRYCZh3sy+e6HO1c99tgY4+Fv9onTo9GfzOSKcPckeTrJ21dtsyeTC7W/p6o+mcnph5eu8
VoPZHK0fOv0oQ8neXT/r/VJ8uYk22rySx3vTfIza4x0XZLrp/tZyuQ0yqHckOQffBGOw+VqaLDC9Pt5nxhjjKp
6Q5Irxxhr/e46OGrOYcGBvifJ26bfIvdokp9qnocNzBEwQBPngAGaCDBAEwEGaCLAAE0EGKDJ/wH7KUf91
jlJMwAAAABJRU5ErkJggg==\n"
        },
        "metadata": {
          "needs_background": "light"
        }
       }
      ]
     },
     {
      "cell_type": "code",
      "source": [
       "\n",
       "sns.boxplot(data['Shucked weight'])"
      ],
      "metadata": {
       "colab": {
        "base_uri": "https://localhost:8080/",
        "height": 296
       },
       "id": "hx5myEVdMLqY",
       "outputId": "cfba6239-1ebd-42f4-a407-5d1750ab2ba1"
      },
      "execution_count": 46,
      "outputs": [
       {
        "output_type": "execute_result",
        "data": {
         "text/plain": [
          "<matplotlib.axes._subplots.AxesSubplot at 0x7f39ea030750>"
         ]
        },
        "metadata": {},
        "execution_count": 46
       },
       {
        "output_type": "display_data",
        "data": {
         "text/plain": [
          "<Figure size 432x288 with 1 Axes>"
         ],
         "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
```


y9tYXRwbG90bGliLm9yZy+WH4yJAAARxUlEQVR4nO3dfXBc1XnH8d9jy4klTEKQCaUOZsPIDpiYOCBoySQ
kEJuR1m1ohzQTJlRyCbjFjexx20wzoNaiuKQdpqXE04QhL2M50wRC0nZMEU7sOpQ04U3mzUCl2YJNcCc
FL3kDGbDkp3/cq2W11stKXt9njb6fGY/37j33nmevtD+dPas9MncXACB7M6ILAIDpigAGgCAEMAAEIYABI
AgBDABBGibTeO7cuZ7L5Y5QKQDw5rRjx4597n5C5f2TCuBcLqf+/v7aVQUA04CZ7RntfqYgACAIAQwAQQ
hgAAhCAANAEAIYAIIQwAAQhAAGgCAEMAAEIYABIAgBDABBCGAACEIAA0AQAhgAghDAABCEAAaAIAQ
wAAQhgAEgCAEMAEEIYAAIMqm/Cfdms2HDBhUKhcz73bt3ryRp3rx5mfddqaWIRV1dXdFlANPStA7gQq
GgRx7/sYaajs+035kDv5Qk/ey12Ms/c+Cl0P6B6W5aB7AkDTUdr/2n5TPts/GpPknKvN+x6gAQgzlgAAhCA
ANAEAIYAIIQwAAQhAAGgCAEMAAEIYABIAgBDABBCGAACEIAA0AQAhgAghDAABCEAAaAIAQwAAQhg
AEgCAEMAEEIYAAIQgADQBACGACCEMAAEIQABoAgBDAABCGAASAIAQwAQQhgAAhCAANAEAIYAIIQw
AAQhAAGgCAEMAAEIYABIAgBDABBCGAACEIAA0AQAhgAghDAABCEAAaAIAQwAAQhgAEgCAEMAEEIY
AAIkkkAb9iwQRs2bMiiK+CowHMCktSQRSeFQiGLboCjBs8JSExBAEAYAhgAghDAABCEAAaAIAQwAAQhg
AEgCAEMAEEIYAAIQgADQBACGACCEMAAEIQABoAgBDAABCGAASAIAQwAQQhgAAhCAANAEAIYAIIQw
AAQhAAGgCAEMAAEIYABIAgBDABBCGAACEIAA0AQAhgAghDAABCEAAaAIAQwAAQhgAEgCAEMAEEIY
AAIQgADQBACGACCEMAAEIQABoAgBDAABCGAASAIAQzUgUKhoHw+r0svvVQXXnihtm/frlWrVunyyy9
XW1ubVq5cqR07dqi9vV0rV65UsVhUoVAobRcKhRHtOzs71d7erkKhoGKxqNWrV6u/v1/5fF4vqzQqlWr
VCwWVSwWdeWVV6q9vV2bN2/WBRdcoI6ODl111VWl/atXr1axWCzWCzVWiwWtWrVqlKbSsViUvdccYXy+
bz6+/vHbTvVa7V8+XIVCoWanG8io12DWmmo+RkBTNr69es1MDCggYEBSdL111+vwcHB0N1+dtu2bSv9QBm+BrU04QjY3W+RdIskt
ba2Tmm4OG/ePEnSTTfdNJXDj5g1a9ZoxzP/F11GmIOz36aWU0+su6/LdFD+qiOXy9VtCJuZ3F0NDQ1atm
yZ3F133HFHKYTNTMuWLSu1X7p0qTZv3jzmucrbTkXltcrlcod1voksXbpUfX19GhwcLF2DWmIOGAjW3d0
96WMaGqqfPRyr7axZs8Y9z6xZszRr1ixJ0syZM9XR0aHOzs7SfcNtOjo6StudnZ3j9lfedioqr9VUrt1kdHZ2as
aMJCaHr0EtEcBAsJaWlkNGcqOF2Jw5c0q3ly9fPuKYsUaCuVxO+XxeZjbieEnK5/PK5/Ol7eH53vL9bW1tMj
O1tbWpublZzc3NamtrK7Vpb29Xc3Nzabu5uXnEOcv7rGw7FeXXKpfLqaWl5bDON5Hhx1t+DWqJAAbqQ
Hd3t5qamnTSSSdpxowZuvrqq7Vo0SKdeuqpuPmj17thYuXKhrr71WjY2NWrhwoTo6OtTd3V3a7u7uHtH+lF
NOUWNjo7q7u9XZ2anFixerp6dHTU1NyVyWrRoUWlEu2DBAjU2Nmrt2rUyM82fP1+nn356af/ixYsXsPGe
UuWrSo1KZSZ2enWlpa1NTUpJ6ennHbTvVaHXPMMUd89DtstGtQK1b5qyfjaW1t9f7+/kl3MjzfVW9zjcN
zwPtPy0/cuIYan0p+TSfrfker42zmgEPU63MCR4aZ7XD31sr7GQEDQBACGACCEMAAEIQABoAgBDAABCG
AASAIAQwAQQhgAAhCAANAEAIYAIIQwAAQhAAGgCAEMAAEIYABIAgBDABBCGAASAIAQwAQQhgAAhCAANAEAIYAIIQwAAQhAAGgCAEMAEEIYAAIQgADQBACGACCEMAAEIQABoAgBDAABCGAASAIAQwAQQhgAAhCAANAEAIYAIIQwAAQhAAGgCAEMAEEIYABIEhDFp20tLRk0Q1w1OA5ASmjAO7q6sqiG+CowX
MCEIMQABCGAAaAIAQwAAQhgAEgCAEMAEEIYAAIQgADQBACGACCEMAAEIQABoAgBDAABCGAASAIA
QwAQQhgAAhCAANAEAIYAIIQwAAQhAAGgCAEMAAEIYABIAgBDABBCGAACEIAA0AQAhgAghDAABCEA
AaAIAQwAAQhgAEgCAEMAEEIYAAIQgADQBACGACCEMAAEIQABoAgBDAABCGAASAIAQwAQQhgAAhC
AANAEAIYAII0RBcQbebAS2p8qi/jPouSlHm/h9bxkqQTQ2sAprNpHcAtLS0h/e7dOyhJmjcvOvxODLsGAKZ
5AHd1dUWXAGAaYw4YAIIQwAAQhAAGgCAEMAAEIYABIAgBDABBCGAACEIAA0AQAhgAghDAABCEAA
aAIAQwAAQhgAEgCAEMAEEIYAAIQgADQBACGACCEMAAEIQABoAgBDAABDF3r76x2YuS9kyxr7mS9k3x
2KxQY23Ue431Xp9EjbVSLzWe4u4nVN45qQA+HGbW7+6tmXQ2RdRYG/VeY73XJ1FjrdR7jUxBAEAQAhg
AgmQZwLdk2NdUUWNt1HuN9V6fRI21Utc1ZjYHDAAYiSkIAAhCAANAkJoGsJm1mdlPzKxgZp8dP
dP/9ZparZf81qvHPzOxJM3vMzE7PzE9M3s4/XrnA2l1iZm5wMTkten0v5hJl9o95qNLP5ZvZ9M3s4/Xr
nA2r8mpm9YGaPj7HfzOMurRprRJmez3bKSI58uEzGyepN+X9KXoXoWio1RBdQr8zsMkmtkj4X5KXVpS
h6R8lrQguZSlNSqYhPqJkVHSPmS1291+KGCyQ1pbevqsca03bHSrpH0n2SWuutRkkLJD0s6R3s6R3
sSZbtyXdX2f1faDsa9yedX3V1Fj2/bBdUp+kj2dd41j/ajkCPld
Swd2fcffXJd0q6eKKNhdL6k1vf1vSR83MaljDYdfo7t9394F08z5J78qwvqpqTF0n6e8lvZplcalqarxS0j+7+8
lyd1fqMMaXdLb0ttvl/S/GdaXFOB+j6SXxmlysaRNnrhP0nFmdlI21U1cn7v/aPhrrJjnSzXXUJK6JH1HUtbfh
+OqZQDPk/TTsu3n0/tGbePug5J+Kam1ayegjSxPWmL4MPdnd78yysDLVXMeFkhaa2Q/N7/N7
D4za8usukQ1NfZIuszMnlcyMurKprRJmez3bKSI58uEzGyepN+X9KXoXoWio1RBdQr8zsMkmtkj4X5KXVpS
1u3uWz+dqtUq6NX2+zJWUN7NBd//32LJU0zfhGiQ9I+ndeuoMJjzMq2vypRr4J962MJ+urqfH9St68WRAx
KV9NjRXt71b2b8JVcx3bJPWmt+cqeRndXGc13iVpRXr7dCVzwBbwNc9p7De5lmvkm3AP1Fl98yUVJH0g6

7qqrbGi3UbV0ZtwNRsBu/ugmX1G0neVvOP4NXd/wsz+RlK/u2+W9FUlL/MKSibNP1mr/mtY4w2S5ki6Pf
2J+Zy7f6zOagxVZY3flXSRmT0paUjSZz3D0VGVNf65pC+b2Volb8it8PRZmhUz+6aSaZq56Vz0Okmz0sdws
5K56bySkBuQ9Ed1Vt9fK3kf54vp82XQM159rIoa6xYfRQaAIHwSDgCCEMAAEIQABoAgBDAABCGAASAIA
Yyqmdk16cpmj5nZI2b2W+n9u81sbg3Ov3GqK1WZWY+Z/cXh1lB2vlYz+8IEbXLjrBK2wsx+s1b14M2JjyKj
KulHdX9H0lnu/loauG8JLuuI8eRThYfzycIVkh5XwAI/OHowAka1TpK0z9OPZrv7PncvD5cuM3soXRf2NOn
QUamZPW7pGtBm1pGOpB81s69XdmZm16Uj4plm9lkzezBtf21Zm2vMbJeZ/bek94xyjplm9my6pu5xZjZ
kZuen++4xswVmdky6nuwD6brAF6f7P2Jm/5HePsHMtqaj/6+Y2Z6yEf9MM/tyuu97ZtaYjuJbJf1L+kqhceq
XHW9mBDCq9T1JJ6eB90Uzq1ykaJ+7n6VkxalxpwLM7AxJ3ZIudPf3SVpTsf8GSSco+dTXR5WsIXGupCWSz
jaz883sbCWfpFyi5JNi51T24+5Dkn6iZK3fD0p6SNKHzOytSlaTe1rJmh/b3f1cJWtB32Bmx1Scal3a5gwly6j
OL9u3QMmym2dI+oWkS9z920pGz59y9yXuvn+864HpiwBGVdz9ZUlnS1op6UVJt5nZirIm/5r+v0PJ5/LHc
6Gk2919X3ru8rVc/0rS2939T9KPBV+U/ntYSYCepiT0PiTp39x9wN1/JWmsj2j/QMmC3edL+rySID5HbywK
dJGkz5nZI0rW1ZitkQGr9Jhb01q3SPp52b5n3f2RSTx2oIQARtXcfcjd73b3Sw+I+mSst3Dq8YN6Y33FgY18n
tsdhXdPKhklHt8um2SPp+OJJe4e4u7f3USZd+jJKzPVbKuwnFK1g34Qdn5Lyk7/3x3//Ekzl++Wl75YwcmRA
CjKmb2HjNbUHbXEkl7Jjhst5I/FTO8iPy70/u3S/oDM2tO9x1fdswWSX8n6U4zO1bJYjqXm9mctO08M3un
kmD9vXTO9VhJvztGDQ8o+bM5B939VUmPSPrj4wIl5v3v/KOf4oaRPpPsvkvSOCR63JP1aydKh
wJj4aY1qzZG0wcyOUzKyLSiZjhjPdyR1mNkTku6lbSf5uXtEuS0lXJ/lbSf5nZkJLphRXDB7n77WmoblYyv/sNSfemG
fmypMvc/SEzu3MpMvaIx1htPf2Pipkj+XIyUj30sl7Uy3r1OyYPdjlix2/6yS3/Yod62kb5rZH0q6V9LlPlATsn
HEe+0ZJN5vZfknnMQ+M0bAaGjCB9E27oXSJy/MkfcndJN5oAaGjCB9E27oXSJy/MkfcndJN5oAaGjCB9E27oXSJy
NOAAIQgADQBACGACCEMAAEIQABoAg/w8HRT0PFPEEVQAAAABJRU5ErkJggg==\n"
       },
       "metadata": {
        "needs_background": "light"
       }
      }
     ]
    },
    {
     "cell_type": "code",
     "source": [
      "data['Shucked weight']=np.where(data['Shucked weight']>0.93,0.35, data['Shucked weight'])\n",
      "sns.boxplot(data['Shucked weight'])"
     ],
     "metadata": {
      "colab": {
       "base_uri": "https://localhost:8080/",
       "height": 296
      },
      "id": "u8_xCV79ML9K",
      "outputId": "562923a8-0638-4701-dd96-34138d1720c4"
     },
     "execution_count": 47,
     "outputs": [
      {
       "output_type": "execute_result",
       "data": {
        "text/plain": [
         "<matplotlib.axes._subplots.AxesSubplot at 0x7f39e9fdec10>"
        ]
       },
       "metadata": {},
       "execution_count": 47
      },
      {
       "output_type": "display_data",
       "data": {
        "text/plain": [
         "<Figure size 432x288 with 1 Axes>"

],
"image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAMtUlEQVR4nO3de4xkZZ3G8eehJ8hwUYRBoi1ja3oUxc2Ow4i6U
dZbjCEKJqjRiDqu0dWNnUm8JCZovJCNuyEasbNeUDdsjBfAWyaKtwiIGlBmYEAQL7VcFnqjzoCiZgaQ4ecf5
7QWzUDX9FSdp6f6+0k6VFedqvPvP2V3Tp+uettVJQBA9w5w5PKDwAAVioCDAAhBBgAQggwAIQQYAAIWbU
vG69Zs6ampqZGNBQAGE/btm3bWVXHLLx+nwI8NTWlrVu3Dm9UALC2L5lb9dzCgIAQggwAIQQYAAIIc
AAEEKAASCEAANACAEGgBACDAAhBBBgAQggwAIQQYAAIIcAAEEKAASCEAANACAEGgBACDAAhBBBgAQg
gwAIQQYAAI2ae/CYfBzc7OqtfrpYexX+bm5iRJk5OT4ZEMx/T0tGZtLDAP6GAI9Ir9fT9utu0J5Dj0oPZck
mdt0pSfrN3Qf+02Ri1x3pIQAPcOB/Zy1jew49SruPPyU9jCVb/YuLJOmA/hrmzX8twHLCOWAACCHAABBC
gAEghAADQAgBBoAQAgwAIQQYAEIIMACEEGAACCHAABBCgAEghAADQAgBBoAQAgwAIQQYAEIIMACEEGAACCHAABBCgAEghAADQAgBBoAQAgw
AIQQYAEIIMACEEGAACCHAABBCgAEghAADQAgBBoAQAgwAIQQYAEIIMACEEGAACOkkwLOzs5qdne1e1i
VwAwVKPs16qRPOoCvV6vi90AwNCNsl+cggCAEAIMACEEGABCCDAAhBBBgAAghwAAQQoABIIQAA0AIQQaAEIMACEEGABCCDAAhBBBgAAghwAAQQoABIIQAA0AIQQaAkFVd7GRubk67d+/W5s2bu9gdVohdu3Zpx06XOc9/ATExK8LHBzG6Q0IVaanuaFHeFSd
kOrf3FRehhLNrHrdkk6oL+GeRO77pB0bHoRO77Fv9PMF4I8IjMz
MykhwBgmeMcMACEEGACCEEGAACCHAABBCgAEghAADQAgBBoAQAgwAIQQYAEIIMACEEGAACCHAABBCgAEghAADQAgBBoAQAgwAIQQYAEIIMACEEGAACCHAABBCgAEgxFU1+Mb2Dkm3LnN/6yvbGEqjWSenDfTXXAOO5/GBKT
mIN5K2UeHldVxyy8cp8CvD9sb62qjZ3sbJliDhrMA3Mwb6XPA6cgACCEEANASJcBDfDfS5Q+q5x1DtDSXMUdWA4PN44BQEAIIMACEEGAACCHAABBCgAEghAADQAgBBoAQAgwAIQQYAEKGmDbL7b9S9S92+/ey+e/tEuB7Nc/31BdDNA8gNuqS3e1mv2dEMzx4iTBqtRPbQEpLGmwFBfmoEIQFO7fnfP1ABQbJzEGVdQ7JP2Nn9mycwd3PEnVxkjMxbnF7nqGMdabYo3V61NxWzH7v4jwOyRGfdZK7oP1yFmZVtwnd2r8rZUVfbvOB3/TG5PKw/jb7ef4H0/Q3/Ldj8eHLpkLE5lRq6PR9vQXUG1tF2sD3qAmTYNqfBRU4Ofk4D0Gv6fY3VxvW4bhedjUUqRtL2Wm6bhjPXUPAOpmKjx9H2Gt2Pqr3cEvSC5yK+/ofS3/ry0s6pyOKhz3vv1w/cdoCoOLACGIBn41z+oYP6ohLjN3z1EJi7qDwQTTjq3Ez9pD6lc3CrA5cWWmKPszS65lbVJ3NMx0uvvjWAQPL16aCn7UgT9Hy/Z0zUc7l5qA+Z4cEPJwlrPg3hIMCTsWGcLEATqbmZMoFmT7KPqK7UubQdjc79I7GuNsVpA0jD4T5nPHgSMfcRFvjwpxBB6MRPm8mSxyu0FtSVwTPaFvCcdTVH2vKOKN1k6Z8AbaEzjljR6VdTyE7WoYH6jx2VX+KbuyQUEqhY1BaryqxmFupNFuffukJJE4pP1y3fa3v7f6hoLwXqvJpF1iEJVZYqOrcKM4FjWYfT7Ew+4aXPnWkYQF5WB1D1oh7VKAlNq2+13H7B1Kn9N2g1Ma5f9a1M5xWs/IqAcI/pXq94rUTBqD+G9OlG/tWeL07N/BlZb5R9VDuJOKbtn1k8J9ADqcXmIVZnEKHhRz2VYdhgqtRt27NcMbHjnwdPzLHF0xK/NzlnR7XOBiFWR4ztUaoQb8kbkC4K1ufbMSw8HxuVI8M38rq+FDAqnPQGMOrSq+Yk7+Vu8E4nnZNhD+jrcN7D1T7Q5Jhd1PRzWYMvkRs7uLgCwkBWRpeWcpTgqmFoPTyx2YZbKCUPjUpbMZVO3Ep9yb+pHeE2uLhvCZRf0HMlEKS8bRJCuQBI59pm8t0hRxjWTQUbnCDffAONEtB94wQWcAMwtmJYtVwiDCo5Wcq0b8P/jvwkl3+9jwfTC+8wXA2NMUYJ9Yx4mYPcEQRx9cz9bMWC0r6+qwO0JFeVWRgExdtq0jJ6fIm2Elq01ZTtjGg6+v9wI8z/qmfz8ThzwNZEzk8PkwmYeJ5BIL3cRrfoh6eB26Yr0Lg8aEtvl92WNkfuMmgLvhKoNSJwD9J4KM66NfSoZTZ9b0aBPtvzhQIxeR2t/ZgAz8DP1rOuwGD0WLVtp99AD8EwPvo1DzWgSnsTlHPBc8eC6HfCSu3dOHb6r7TqZBG8B7rTrt5hMDxPZQq0Z

```
V0IBFtL+021NV97Yvx/tEVa1PjwsHPo6AgcWtlXRBe4R8j5o/pAnsN46AASCEX8IBQAgBBoAQAgwAIQQYA
EIIMACE/BX5YZAjuU74+wAAAABJRU5ErkJggg==\n"
        },
        "metadata": {
         "needs_background": "light"
        }
       }
      ]
     },
     {
      "cell_type": "code",
      "source": [
       "sns.boxplot(data['Viscera weight'])"
      ],
      "metadata": {
       "colab": {
        "base_uri": "https://localhost:8080/",
        "height": 296
       },
       "id": "NmvSnK0kMMKx",
       "outputId": "1c8e9df7-82a8-4dd9-d2ff-c902c717cd59"
      },
      "execution_count": 48,
      "outputs": [
       {
        "output_type": "execute_result",
        "data": {
         "text/plain": [
          "<matplotlib.axes._subplots.AxesSubplot at 0x7f39e9f84450>"
         ]
        },
        "metadata": {},
        "execution_count": 48
       },
       {
        "output_type": "display_data",
        "data": {
         "text/plain": [
          "<Figure size 432x288 with 1 Axes>"
         ],
         "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAP4klEQVR4nO3df2ydV33H8fc3c5uYkwugmka1JWLrB6IACDv0RaAu
qCjhEwBiwdtNEqg5YW5Rm3WCbhIU68AQM1K4KbMAQaqIFqdEqqd
EDaBuL07l/72L2+sZNr+97ne1u/X5Llx8fnOeb76fnD5P7mmUUpAk1W9fdGSwZGZrJEqd
CQGsCQlMYAlKcnAQjqvXbu2DA4O9zqAcHBxkfH+9cqAcUpiQEsSUkMYElKYBLUhIDAJGAJSmJASQxgSUpTGAJ
CQGsCQlMYAlKkBLElJFvT/hHss2bZtG41GI2XugwcPARNTnW1Bqk5WzZBnCj0eC2b93
F8TNW1z73ygd/BMAPfpp3+Vc+eDhtbklNyzaAAY6fsZqHzn117fM+7u5dAClzt9cgKY/3gCUpiQEsSUkMY
ElKYgBLUhIDWJKSGMCSlMQAlqQkBrAkJTGAJSmJASxJSQxgSUpiAEtSEgNYkpIYwJKUxACWp
CQGsCQlMYAlKYBLElJFvT/hHss2bZtG41GI2XugwcPARNTnW1Bqk5WzZBnCj0eC2b93
F8TNW1z73ygd/BMAPfpp3+Vc+eDhtbklNyzaAAY6fsZqHzn117fM+7u5dAClzt9cgKY/3gCUpiQEsSUkMY
ElKYgBLUhIDWJKSGMCSlMQAlqQkBrAkJTGAJSmJASxJSQxgSUpiAEtSEgNYkpIYwJKUxACWp
CQGsCQlMYAlKYBLElJDGBJSmIAS1ISA1iSkhjAkpTEAJakJAawJCUxgCUpiQEsSUkMYElKYgBLUhIDWJKSGMCSlMQAlq
QkBrAkJTGAJSmJASxJSQxgSUpiAEtSEgNYkpIYwJKUxACWpCQGsCQlMYAlKUktAbxt2za2bdtWx1TSo4Kv
CQEM1DFJo9GoYxrpUcPXhMBbEJKUxgCWpCQGsCQlMYAlKYkBLElJDGBJSmIAS1ISA1iSkhjAkpTEAJakJA
awJCUxgCUpiQEsSUkMYElKYgBLUhIDWJKSGMCSlMQAlqQkBrAkJTGAJSmJASxJSQxgSUpiAEtSEgNYkpIY
wJKUxACWpCQGsCQlMYAlKYkBLElJDGBJSmIAS1ISA1iSkhjAkpTEAJakJAawJCUxgCUpiQEsSUkMYElKYgB
LCY4dO0aj0aDRaHDZZZdx+eWXMzk5CcDk5CQXX3wx559/Ppdccgk7d+5kZg
```

1XqPRYNOmTTQaDSYnJ7niiitmxpvW3t56zsn6dUMvxqxLL2s3gKUE9957Lw888ABjY2Pcdddd3HnnnezYs
QOA7du3MzExQSmFAwcOcM0118ycc/ToUY4ePcrY2Nis8cbGxmbG2759O/v3758Zb1p7e+s5J+vXDb0Ys
y69rN0Almo2OTnJ4cOHAZiYmJhp3717N41GgxtvvHFW/1LKCWNMTEzMrFwbjcbMOBMTE+zevZtSCnv2
7Jm1qt6zZ89M+/j4+Kxzpsdq79eNVV8vxqxLr2sf6Opo8zh48CAPPfQQW7durWO6jjQaDVb87MRf7OVix
dEf02j8pK9+JsvFPffcM2eoHjt2jLGxMY4fP97ROGNjY1x33XUnrGCPHTsGwPHjx9mxYwdXXnkl27dv5+GH
H55pv+qqq+Ycq73f9PlL0Ysx69Lr2k+5Ao6It0XEeESMHzp0qGsTS8vV/fffP2d7KWXWivhUWlewc5mamm
Lv3r0A3HTTTUxNTc20HzlyZM6vbY7z4s2vNnN78UvRizLr2u/ZQr4FLKx4GPAwwPDy9qybh+/XoArr322sWc3hNbt
25l34F7s8tI8/CqJzJ0zrq++pksF1dffTU7d+48oT0iOPvsszO4cHBwZnPc50zMDDAK17xCgAuuuOACdu3axd
TUFAMDA6xatWpWCE+P1d5Wew9PxXVrb9ezzd6w35pHDT1Vn2nK6yQFFx1stLmWm6k4xCXW6o2q4iQqpWb3MmNHZvDMJlHj2y5SvgBRVgRAZfLmuEk48hZNk9BoWRhaOfmfXZXG9Dd8h
PVP8lqlYTlxYDWsnLPKCOBf1SYcvvcxeHedbaX6d5cIxzEZUlhuA9I7iIiIZ0hyYX8rVcWUmEkHS6uyH
b1Ps4BPz07ZWCYo2TpdFMXH+jptlOOxx5VDgswhWX9ULgqq5lzRkoNSXFmUJqhhQ5+zpIO5+K+3VtvvPfz
7bXRiMzNwuEGVzFAVl3L4o0yEg4Rnm9VWgVKzTz8lrnMC4eALhT6Flt9mkh0dTGN6rNYJD2xxsQHFEkGi3m
4/w3JuJuwQjh3TVzXn8kHKHs2Ezk5nGZ68TvO/dyt1Uj1L+fT+/7zf6TeSl3f2MebeTTGTzaNmAPtDTWoL
4CJkOlAv38YMoc5UhIV8RXE+4AAAAAAsSUVORK5CYII=\n"
},
"metadata": {
"needs_background": "light"
}

```
      }
     ]
    },
    {
     "cell_type": "code",
     "source": [
      "data['Viscera weight']=np.where(data['Viscera weight']>0.46,0.18, data['Viscera weight'])\n",
      "sns.boxplot(data['Viscera weight'])"
     ],
     "metadata": {
      "colab": {
       "base_uri": "https://localhost:8080/",
       "height": 296
      },
      "id": "LLj9UgwlMM6I",
      "outputId": "e4ce01e4-741e-4695-c45f-16c0c81813ee"
     },
     "execution_count": 49,
     "outputs": [
      {
       "output_type": "execute_result",
       "data": {
        "text/plain": [
         "<matplotlib.axes._subplots.AxesSubplot at 0x7f39e9ea9290>"
        ]
       },
       "metadata": {},
       "execution_count": 49
      },
      {
       "output_type": "display_data",
       "data": {
        "text/plain": [
         "<Figure size 432x288 with 1 Axes>"
        ],
        "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAMDklEQVR4nO3df4xlZ13H8c+3u1RbC2q7pdEtYYFtbKpBhVVBbF
MjAZXYqpTYGBMMAlZkXUVQE0mDEKNYgpL1B22UqDGWQjh2mqtWmzlZ3fpb2jj0LTCJsiWJoW6BdL
28Y97aodhtzu7O3O/s7OvVzKZe8+cmfPM05n3np577zM1xggA83dc9wAAjlUCDNBEgAGaCDBAEwEGaL
LxUHbetGnT2LJlyyoNBWB92r179/1jjjjFOXbj+kAG/ZsiW7du1auVEBHAOq6r79bXcJAqCJAAM0EWCJAAM0EWCAJgIM
0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCaH9
DfhODQ7d+7MwsJC9zBWxJ49e5Ikmzdvbh7Jkdu6dWu2b9/ePQwQ4NW0sLCW+74VB498eTuoRyxDfs
eTJJ87itH94/Mhn0PdA8B/t/R/dt0FHj0xJPz8Jk/3j2MI3bCXdckyVH/vTz+fcBa4BowQBMBBmiwABNBBi
giQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQY
oIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EG
KCJAAM0EWCAJgIM0ESAAZoIMECTuQR4586d2blz5zwOBbCiVrNfG1flqzYvLy/P4zAAK241+2UKCNBEgAGaCDBAEwEGaCLAAE0EG
KCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQY
oIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EG
KCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATTbO4yB79uzJ35S9mYeFLx9zPIodvYWEhJ5xwwqp35Jt27Yd1unc5s2b
mYeFLx9zPIodvYWEhJ5xwwqp87YOeAVfVa6tqV1Xt2rt376oMDuBYdNAz4DHGVUmuSpJt27aNwznIWWed
lSS58sorD+fT16TLL788u//m3mx8ev5HPnF8jk9T+OaHBonAfAYXdNAz4DHGwSLTmdkyG0tvLnjjN96tz6BtN27u+63PsV2GzeWH30z2tZ9xAHAV3RtHKTBCiR7Z20qQgx/CwTQ
GwAQdNzBN+VE
OAz4DHGwSLTmdkuS5Jt27Yd1unc5s2b
kyTvete7DufTj1o7duW83/W83/W3INGKCJAAM0EWCAJgIM0ESAAZoIME
ATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmiwABNBBigiQADNBFggCYCDNBEgAGaCDB
AEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggw
QBMBBmiwABNBBigiQADNNk4j4Ns3bp1HocBWHGr2a+5BHj79u3zOAzAilvNfrkGDNBEgAGaCDBAEwEGaCLAAE0EG
```

```
BmgiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATA
QZoIsAATQQYoIkAAzQRYIAmG7sHsN5t2PdATrjrmu5hHLEN+76QJEf997Jh3wNJTuseBiQR4FW1devW7i
GsmD17HkmSbN58tMfrtHX134WjmwCvou3bt3cPAVjDXAMGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZo
IMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmgiwABNBBigiQADNKkxxvJ3rtqb5L7DPN
amJPcf5ueuJ+ZhxjzMmIcnrOe5eOYY49SlGw8pwEeiqnaNMbbN5WBrmHmYMQ8z5uEJx+JcuAQB0ESAA
ZrMM8CXzfFYa5l5mDEPM+bhCcfcXMztGjAAX8slCIAmAgzQZEUDXFU/WlV3V9VCVf3Wfj7+DVV1xfTxj1
XVlpU8/lqyjLk4p6o+UVWPVNUFHWOch2XMwxuq6pNVdVtV/VtVPbNjnKttGfNwUVXdXlW3VNV/VtVZ
HeNcbQebh0X7vbyqRlWt76eljTFW5C3JhiSfTvLsJMcnuTXJWUv2eV2Sd0+3L0xyxUodfy29LXMutiR5bpK/
TnJB95gb5+GHk5w43f6l9fgzscx5eNqi2+cl+efucXfMw7TfU5PckOSjSbZ1j3s131byDPj7kyyMMe4ZY3w1y
XuTnL9kn/OT/NV0+8okP1JVtYJjWCsOOhdjjHvHGLcleaxjgHOynHm4foyxb7r70SSnz3mM87CcefjiorvflG
Q9Pjq+nEYkyduSvD3Jl+c5uA4rGeDNST6z6P5np2373WeM8UiSB5OcsoJjWCuWMxfHgkOdh19I8k+rOqI
ey5qHqvrlqvp0kj9I8itzGts8HXQequp5SZ4xxrh6ngPr4kE41oSq+rkk25Jc0j2WLmOMPxljPCfJbyZ5c/d45q
2qjkvyziS/3j2WeVnJAO9J8oxF90+ftu13n6ramOSbk3xhBcewVixnLo4Fy5qHqnpxkt9Oct4Y4ytzGts8HerP
w3uT/OSqjqjHwebhqUm+K8kHq+reJC9IctV6fiBuJQN8U5IzqupZVXV8Zg+yXbVkn6uSvHK6fUGSfx/TVfd1
ZjlzcSw46DxU1fcmuTSz+H6+YYzzsJx5OGPR3Zcl+a85jm9ennQexhgPjjE2jTG2jDG2ZPaYwHljjF09w119Kx
bg6Zru65Ncm+RTSd43xrizqt5aVedNu/1FklOqaiHJG5Ic8GkoR7PlzEVVfV9VfTbJK5JcWlV39o14dSzzZ+KSJ
Cclef/0FKx19w/VMufh9VV1Z1XdktnvxisP8OWOWsuch2OKlyIDNPEgHEATAQZoIsAATQQYoIkAAzQRYA
5ZVV1fVS9dsu1Xq+rPquq8J1vlaq2rqg8vY597q2rTfrafW1U/uDojYz0SYA7H5Zk9iX6xC5NcPsa4aozx+6tx
0OnVk6tqjHEkAT03iQCzbALM4bgyycumVzNlWtf525PcWFU/X1V/PG1/RVXdUVW3VtUN07YNVfWOaft
tVbV92v78qvqPqtpdVddW1bdN2z9YVX9UVbuS7Kiqn5bNjWkr65qvq61qk5bOriqurqqnjvdvrmqLp5uv7WqX
jPdflNV3TSN4XcWfe5D0/vjqupPq+quqrquqq5Zsm7z9pqt53x7VZ05zcFFSX5tekHJ2Ss226xbq35Gwfozxn
igqj6e5MeSfCCzs9/3jTHGktVFL07y0jHGnqr6lmnbazNbC/l7xhiPVNXJVfWUJDuTnD/G2FtVP5Pkd5O3
c48cY25Kkqr41yQumY706yW/k6xdvuTHJ2VV1X5JHkrxo2n52kouq6iOriqzshsecTKbL2Bc8YYNyz6Gj89jfOs
JE/P7JVb71n08fvHGM+rqtcleeMY49VV9e40fvHGM+rqtcleeMY49VV9e4kD40x3rHsyeSY5gyYw7X4MsSF0/2lPpTkL6ezzg3TthcnuXR6
WWrGGA8k+Y7Y7MFmG5bnop7pvztesCX7Ho9ulJrq2q25O8Kcl37ue4NyY5J7PwXp3kpKo6Mcmzxhh3J3nJ
9HZzkk8kOTOzIC/2Q0neP8Z4bIzxuSTXL9/n430/vd2cWajhkzoA5XB9I8ofT+q0njjF2L91hjHFRVf1AZovL7K
6q5x/ga1WSO8cYLzzAx/930e2dSd45xriqqs5N8pb97H9TZktb3pPkuiSbkrwms1g+frzfG2Nc+iTf38E8vmr
bo/F7xGFyBsxhGWM8lNlZ4Xuy/7PfVNVzxhgfG2NcNcxGRvZksRXpfkFx9/QK2qTk5yd5JTq+qF07JTq+qF07anVNX+z
myT2RKmjy9huN8Fa6a/tvCZzBY6+khmZ8RvzOzP3CSzxWBeVVUnTcfbXFVPX/JlPpTk3dO14NMye4DtYL
6U2ZKKsCwCzJG4PMl35wABTnLJ9CDVHUk+nNnfAPvzJP+d5LqujXJz07BvCDJ26dtt+TAzyZ4S2Yrp+1Ocv
+TjO3GJJ8fYzw83T59ep8xxr8k+dskH5kuZVyZrw/n32X2Fxs+meRvMrtU8eCTHCJuWyGhocQF
WdNMZ4qKpOSfLxJC+argDinDtCg7sH6dnbxyf5G3iy0pzBgzQxDVggCYCDNBEgAGaCDBAEwEGaPJ/c89
NgS0j0p4AAAAASUVORK5CYII=\n"
        },
        "metadata": {
          "needs_background": "light"
        }
      }
    ]
  },
  {
    "cell_type": "code",
    "source": [
      "sns.boxplot(data['Shell weight'])"
    ],
    "metadata": {
      "colab": {
        "base_uri": "https://localhost:8080/",
        "height": 296
      },
      "id": "dSpy5dAcMWib",
      "outputId": "cb9adb1f-31e4-487f-8de7-60aac8e6e86d"
    },
    "execution_count": 50,
    "outputs": [
      {
        "output_type": "execute_result",
```

```
   "data": {
    "text/plain": [
     "<matplotlib.axes._subplots.AxesSubplot at 0x7f39e9e966d0>"
    ]
   },
   "metadata": {},
   "execution_count": 50
  },
  {
   "output_type": "display_data",
   "data": {
    "text/plain": [
     "<Figure size 432x288 with 1 Axes>"
    ],
    "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAPwklEQVR4nO3df2zU933H8dcb2xkGPVu6AEMTVjR2uB
27X50jZpUBqbQqVPVSRUkRLDC5JBMq1QJT5jV+2OKNiVj7dZommpPWpu22hbUOHRhS0SXjrR2SyEhKb
k4JIV2LZiOFbADhvf++H59MeaIv2e+930b/HxIiPP3vvf9fL7c8eTr7/m+mLsLAFC8VJVjVtbtW9XR0VHomAA
uN+MDXC6Xtf/Z53VhzlsLH7vh7ClJ0v+8VtzT0HD2ZGFjAXhjMz7AknRhzls1fPPqwsdtfqFJKmlpaXQcVtbW9XQ8Y+duyYJKmlpaXQcVtbW9XR0VHomAA
uN+MDXC6Xtf/Z53VhzlsLH7vh7ClJ0v+8VtzT0HD2ZGFjAXhjMz7AknRhzls1fPPqwsdtfqFPkgode2xMAPE4
BwwAQQgwAAQhwAAQhAADQBACDABBCDAABCHAABCEAANAEAIMAEEIMAAEIcAAEIQAA0AQAgwA
QQgwAAQhwAAQhAADQBACDABBCDAABCHAABCEAANAEAIMAEEIMAAEIcAAEIQAA0AQAgwAQQgw
AAQhwAAQhAADQBACDABBCDAABCHAABCEAANAEAIMAEEIMAAEIcAAEIQAA0AQAgwAQQgwAAQhw
AAQhAADQBACDABBCgnwzp07tXPnziKGAqYFXvPIorGIQcrlchHDANMGr3lkwSkIAAhCgAEgCAEGgCAEG
ACCEGAACEKAASAIAQaAIAQYAIIQYAAIQoABIAgBBoAgBBgAghBgAAhCgAEgCAEGgCAEGACCEGAACEKA
ASAIAQaAIAQYAIIQYAAIQoABIAgBBoAgBBgAghBgAAhCgAEgCAEGgCAEGACCEGAACEKAASAIAQaAIAQ
YAIIQYAAIQoABIAgBBoAgBBgAghBgAAhCgAEgCAEG6mhoaEhbtmzRxo0bdffdd2vVqlXatGmTyuWyWyNm/
erA0bNqi9vV3r1q3TqlWrVC6VXVS6XK+v19/drZo1GhgY0L333quhoSENDQ2Y4BBuqop6dHhw4d0osvvqiXX35Zw8PDOnz4sL
u7/X8889rcHBQIyMjevXVzU8PKzu7m51d3dX1uvq6tKZM2e0fft2Tl9Td3dX1uvq6tKZM2e0fft2Tx4UL6rerE2M0nVY2tmly2/4447qm7n9ttvV19fn0ZHR9XY2FhFhZr9rysdMdWda
tZaxqSqXSJRGeN2+eRkZGMj22HmqZ+1RwDhiok4ULF6qpqSnXbTY1NVW2OXHb99133yVfNzY2at26dV
W3s379es2alfz1b2hoqKxXbXkt69YyVjWdnZ2XfL1jx47Mj62HWuY+FQQYqJOmpia1t7dXva9UKl1x+fj75s
2bV/ndzLRq1Sq1t7fLzLR69erKuqVSSWvXrq2sL0lr1qzR/Pnzq44zf/78ynybH4l9nqp3uPuNExfWFOCpMrN+d2+r+bH1UMvcp
2LSI2Az22Rm/WbWf/z48dwGBq53586dk3u+/7i7+xW3WW35E088UXXdPXv2aHR0VFIS0YqJOmpia1t7dXva9UKl1x+fj75s
2bV/ndzLRq1Sq1t7fLzLR69erKuqVSSWvXrq2sL0lr1qzR/Pnzq44zf/78ynybH4l9nqp3uPuNExfWFOCpMrN+d2+r+bH1UMvcp
WpdsnBaPhfXk61bt+ro0aE6efkrhE2M0nVY2tmly2/4447qm7n9ttvV19fn0ZHR9XY2FhFhZr9rysdMdWda
tZaxqSqXSJRGeN2+eRkZGMj22HmqZ+1RwDhiok4ULF6qpqSnXbTY1NVW2OXHb99133yVfNzY2at26dV
W3s379es2alfz1b2hoqKxXbXkt69YyVjWdnZ2XfL1jx47Mj62HWuY+FQQYqJOmpia1t7dXva9UKl1x+fj75s
2bV/ndzLRq1Sq1t7fLzLR69erKuqVSSWvXrq2sL0lr1qzR/Pnzq44zf/78ynybH4l9nqp3uPuNExfWFOCpMrN+d2+r+bH1UMvcp
HLlysyPrYda5j4VBBioo/Xr12v6RiFi1Sc3OzOjs71nZ
WVmvq6tLc+fO05lISy05IlSyY9Whu/ncmW17JuLWNVM3GfanlsP
dRzfKvl/FRbW5v39/fXPMjYO+7T8bzj2Dng4ZtXFz528wt9klTo2M0v9Gkl54Drbjq/5lE8Mxtw97aJyzkCBo
AgBBgAghBgAAhCgAEgCAEGgCAEGACCEGAACEKAASAIAQaAIAQYAIIQYAAIQoABIAgBBoAgBBgAghBgAAhCgAEgCAEG
gCAEGACCEGAACEKAASAIAQaAIAQYAIIQYAAIQoABIAgBBoAgBBgAghBgAAhCgAEgCAEGgCAEGACCEGAACEKAASAIAQaAIAQYAIIQYAAIQoABIAgBBoAgBBgAgjQWMUhra2sRwwDTBq95ZFFIgDs
6OooYBpg2eM0jC05BAEAQAgwAQQgwAAQhwAAQhAADQBACDABBCDAABCHAABCEAANAEAIMAEEI
MAAEIcAAEIQAA0AQAgwAQQgwAAQhwAAQhAADQBACDABBCDAABCHAABCEAANAEAIMAEEIMAAEI
cAAEIQAA0AQAgwAQQgwAAQhwAAQhAADQBACDABBCDAABCHAABCEAANAEAIMAEEIMAAEIcAAEIQ
AA0AQAgwAQQgwAAQhwAAQpDF6AtNBw9mTan6hL2DcIUkqdOyGsyclLSxsPABXNuMD3NraGjb2sWO
jkqSWliKDuDB0nwG8bsYHuKOjI3oKAGYozgEDQBACDABBCDAABCHAABCEAANAEAIMAEEIMAAEIcAAEI
QAA0AQAgwAQQgwAAQhwAAQhAADQBACDABBCDAABCHAABCEAANAEAIMAEEIMAAEIcAAEMTcPfv
KZsclvTKFcRZIOjGFx13L2Ofr30zbX4l9nqp3uPuNExfWFOCpMrN+d2+r+0DTCPt8/Ztp+yuxz3njFAQABCH
```

```
AABCkqAA/XNA40wn7fP2bafsrsc+5KuQcMADgcpyCAIAgBBgAguQaYDNrN7MfmFnZzD5T5f5fMLNH0v
ufMbNSnuNHyLDPf2Jmh8zsgJn9h5m9I2KeeZpsn8et9zEzczO7pn9sKcv+mtnH0+f5OTP756LnmLcMr+tFZ
vakmX0vfW2vjphnXszsH83sp2b27BXuNzP7m/TP44CZ3ZrLwO6eyy9JDZJekrRE0g2Svi9p+YR1tkj6+/T2Jy
Q9ktf4Eb8y7vNtkuaktzfPhH1O13uTpL2S9klqi553nZ/jpZK+J+mX0q9/OXreBezzw5I2p7eXSzoSPe+r3OcP
SrpV0rNXuH+1pMclmaT3S3omj3HzPAJ+n6Syuw+6+zlJX5a0dsI6ayX1pLe/JunDZmY5zqFok+6zuz/p7mfT
L/dJenvBc8xbludZkj4r6S8ljRQ5uTrIsr8bJX3O3X8mSe7+04LnmLcs++yS3pze/kVJPypwfrlz972STr7BKmsl
9Xpin6S3mNnbrnbcPAPcIumH474+mi6ruo67j0o6JWl+jnMoWpZ9Hu8eJf+KXssm3ef027Ob3P2xIidWJ1
me42WSlpnZ02a2z8zaC5tdfWTZ5y5JnzSzo5L6JHUUM7Uwtf5dz6TxajeAbMzsk5LaJP1u9FzqycxmSfprSX
cFT6VIjUpOQ3xIyXc4e81shbv/b+is6usPJX3R3f/KzD4g6Z/M7F3ufjF6YteSPI+Aj0m6adzXb0+XVV3HzBqVf
OsylOMcipZln2Vmt0vaJulOd3+toLnVy2T7/CZJ75L0lJkdUXK+bNc1/EZcluf4qKRd7n7e3V+WdFhJkK9VWf
b5HklfkSR3/29Js5VctOZ6lenveq3yDPB3JC01s8VmdoOSN9l2TVhnl6T16e0/kPSfnp7hvkZNus9m9h5JX1A
S32v93KA0yT67+yl3X+DuJXcvKTnvfae798dM96pleV3/m5KjX5nZAiWnJAaLnGTOsuzzq5I+LElmdouSAB8
vdJbF2iVpXfrTEO+XdMrdf3zVW835ncTVSv71f0nStnTZnyv5CyglT9JXJZUlfVvSkuh3PwvY5z2SfiJpf/pf
c673PE9Z9StfwT0FkfI5NyWmXQ5IOSvpE9JwL2Oflkp5W8hMS+yV9JHrOV7m/X5L0Y0nnlXxHc4+kT0n61
Ljn+HPpn8fBvF7TfBQZAILwSTgACEKAASAIAQaAIAQYAIIQYAAIQoCRKzPbll4R7ICZ7Tez30iXHH0l/Rjbrdj5k
Zl9Pb99lZn+b4xx/xcy+lmG901dY/lEzW57XfDBz8VFk5Cb9SOrvSbrV3V9Lg3tD8LQu4+4/vJBoKn6qKSvK
/m5X2DKOAJGnt4m6YSnH7d29xNp7MZ0mNl3zeygmd0sSWY2N70W67fTa8tWu7JaVel23pJ+OmnIzNal
y3vN7A4zazCN7A4+kR+R+l95fGrvtqZnPM7CvptXz/1ZLrVLeNG+MvzOz76UV2FprZb0q6qU6U9ID6RH+r17t
HxpmLgKMPP27pJvM7LCZMJl546MJl546lS73yrp7yT9abpsm5KPpL9PybWTHzCuzRnHe1rSb0n6NSUf/
kNSNfHJH1LyaUnTHzCzuM7LCZfd7MJl546lS73yrp7yT9abpsm5KPpL9PybWTHzCuzRnHe1rSb0n6NSUf/
2/MkkufTrxIzm8rud6t3ZdL+3pC/XuQzkH1zCuzRnHe1rSb0n6NSUf/oikqGfSba9Lt
/7j8YvxzZSQfQ3XdOyamGiXMGcsE5YOTK3S8oCelTZnZQycWXvpjePXYluAt6/bVnkj7m
7j8Yvx0zW5hhuL2S/lhJsLdJ+n0l53/OW7bHe7+jQnbLmXcnfP++mf1x88RvYfb5b0iu
uTPOwbSs4NW7qN92Qdz91/qOQSiEvdfVDSfyk5tbF33LY3m1lTuu1lVU5vPC3p4+n9yyWtyDD0z5VcdhO
4KgQYeZonqSd9Q+uAkitmdU3ymM9KapJ0wMyeS7+uxTNKrtolJUe+LUpCLEn/oOQnFb6bvun6LBV1+FPt
5STea2SFJ3ZKeq2ZKeIW/CYcqn/XCYcq4GhpmNDNrkNTk7iNpTPdIeqcn/XcaUFec08JMN0fSk+lpCp
O0hfiiKBwBA0AQzgEDQBACDABBCDAABCHAABCEAANAkP8H2S1d8d3yc+IIAAASUVORK5CYII=\n"
```


```
        },
        "metadata": {
          "needs_background": "light"
        }
       }
      ]
     },
     {
      "cell_type": "code",
      "source": [
       "data['Shell weight']=np.where(data['Shell weight']>0.61,0.2388, data['Shell weight'])\n",
       "sns.boxplot(data['Shell weight'])"
      ],
      "metadata": {
       "colab": {
        "base_uri": "https://localhost:8080/",
        "height": 296
       },
       "id": "5-P0edElMWxv",
       "outputId": "34dfa829-f3a0-4628-a24e-d66cfd332823"
      },
      "execution_count": 51,
      "outputs": [
       {
        "output_type": "execute_result",
        "data": {
         "text/plain": [
          "<matplotlib.axes._subplots.AxesSubplot at 0x7f39e9dec590>"
         ]
        },
```

"metadata": {},
"execution_count": 51
},
{
"output_type": "display_data",
"data": {
"text/plain": [
"<Figure size 432x288 with 1 Axes>"
],
"image/png":
"iVBORw0KGgoAAAANSUhEUgAAAWAAAAEGCAYAAABbzE8LAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzA
AALEgAACxIB0t1+/AAAADh0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uMy4yLjIsIGh0dHA6L
y9tYXRwbG90bGliLm9yZy+WH4yJAAAMFElEQVR4nO3de4yld13H8c+3u8VeBBG2NrgUlrItTRGEEuqB4QY
yXNEShpIRgYrCJFqVkbaISSaqJEY3RJibNclHlPKHabHHRpCKKom0KJS1uoXeBTCP2QsqlN1p+/nGept
Ntcc7Mnjnf2e7rlWx65swz5/n+es68999nn7DxbY4wAsHxHdQ8AcKQSYIAmAgzQRIABmggwQQJPt69l4x44
dY9euXZs0CsDT03XXXXXf3GOOEg+9fV4B37dqV/fv3L24qgCNVAd35fp/3CPpfllw/fVVlVx/83/2QQ0z3KQmy7/74kyf88
Mvn37srKy0j3Gwhw4cBJsPnzuZJ5rd79+7s3bu3ewx4Ag8pcVkUh8/83Rx7JKS9aT0ZDK8BoIX5MrXmeV+nGQ
Hi8fLbdf2/3CPCUDo/voKeBR497Th447fXdYyzEsZ//WJIcNut5bF7YapwDBmgiwABNBBBgiQADNBFggCYC
DNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0ESAAZoIMEATAQZoIsAATQQYoIkAAzQRYIAmAgzQRIABmggwQBMBBmgiwABNBBigiQADNBFggCYCDNBEgAGaCDBAEwEGaLJ9GTs5c
5+hH7+uPQrKys5Nhj92Ux17zCLiq3l5V+6tq/1133bUpQwAcidY5jfDDJB5Nkz549GzqM27lzZ5Lkoosu
2siXH/bOP//8Xf7V7rHOGJ9+5hnZffJJx6ffrz8OzWb+yck5YIAmAgzQRIABmggwQBMBBmgiwABNBBigiQ
ADNBFggCYCDNBEgAGaCDBAEwEGaCLAAE0EGKCJAAM0EWCAJgIM0GT7Mnaye/fsNoE2s5m/Ce2WxAE75U0DXuuLHKeLWZp3sqn2+Ewc4+m2a6AGyXAGWb0aCwBhbRXJCAPKgdb5kDDDVpEdTpAAABRfABSvG7VmpLQJ2+CL89nOIMWy6
sW7NQ/Hb1dJaUU79nkqIJtCjr1iDAbgFy2XqtWMxB8WGaHxEuhNl2p9kkE3YmGbgkRaPhWmeGD98GrVZ/Hl
ik1tklNkvrV2fk3VpaTzY6j4BwTYqzb3vdLZmx/q5L05ltLzzMjdcaryNZB4NeZhPxRBTzLJ1akljIzfv9Zji/b
ra1VUn4+5g4qTRfkeFrqDmXQRZbFFNIIR9QPL9PmJ2zJbcDpeUx2WCJHjJXz6n8GXY4uV6nmlmSvjn3bsOTT
Z2OfaPwSUj4LmeJwdWpetQWy/wpWVMyGZ/GQXS3FzxvFHcB8qrvaa2p9pj0U6GJ7Vwfpz9efZ4WnZ2EGmKj7
4Uxpd0NjO3L17dbqHfhvIhpfTVVSnnmHyGZPvg2/lKp1Qcvke3bPl0jrN/Wps+qNlZp2TPeONm9W4iTpf6ZF
UjdcVS05Osd0Mq0TA5bpb5tdhGcZDz59tirrr/mYWcMv0ReR/a1eygKhSuRmgQG6D1XL9dEJH7kAy0ThKzrNSj
OxPSFJLHdTGyuvy8BhZM/TvDX55JBs7ZRjY3lbZqYxJXU7wSyXjFbm4/O0VwpZrjy9qyK2ho/wkHkzdxQE8
XaPS4ucGPrrJU/8l3kBoD9kc7KxaoFUDq/7FT7/hHzHFvCrJgrn4nFy8gZFPI2rSHTm/3iS7PtnBxMjF5ovOO
5OPmyDOWM3q4wX7t+DLRTuuhCuvlXo9/wgqglr5Jf4k69WwiNrJQ2+Tv3mR56Gu1OYhCjk/c29wsqQc6yL7IP
4GAQIKnM+D+W3f2dHPKMjr7GAydhcGsOM4uTOkdgYFhWQnH9/fnVOxnAhPH4HhAB03sRyO1TCKNR+qOQK
BavNdsnFEl2EjrmrRWVPWmn2IJ73Iq0+/mUfMhAo8nUO1Ok+z6UPR7wMhJ+bW1+dw9+uz+LzqV8JHo4nTnN
EYx5HzGUOnOn9WfRfOzPRC8nlKHhIbMXWaTfRlxjT9H7fF6f0bv8l64ah6t4/2r+bwD+Tt25nBt23jM/Lfl3d3Y+u
PIxWwgNePJR3ouF7f3aNEwDRh6ZNVmm3M8yFZ7OIt2T8L1bGlJZazM7vLkWTNpMzCvwv/6Dbh84Y9sk0+v9b
H/Wj6dJe2X0cFrQZRTsm2hhZVTNPvW+T/Eqc2qdpvz2P2eu8YZ+Op9oqVQc5Wzk0yswT9+8C5Mt5r/NDHHx
M4c5XpPnmk3p3Y7KKCLBM8uPAhP5I67DuLOeYCrXM5w6ySz3vZvRCVZT9ON1jYnpnhzLSBR+RyH5h4mcqY3
W/Y2/8N5fmWOg/03RmTJaxW+iY/+N7lPc2a1FrNHNXX0Wpx7nLBPeN4jK1VzV1bgAgjH1fjGIoOegAL+IKX
KTsFIj9HvQPWn3wuX3d0ReqIOmfQDK6x/OHv9sHSsf9WJ1pX+EjZG8T7e9c/hnuuVdXVY/7Hac+3d95tNJ/fmO/
bPv4Us5ur3Z1xdLuyAGwwJa55+nfP+VcFpk1o8BWBsvGbNs9Q2HdqmndD9+nHeB3dxPx/5ya4hGVmtl/BbnUR/LPx4
rr9lZF+NNJf8mXPN0EJHOEfRl7iNP7vXD/vJHfO3hyzNs2QJeb0Ys2b8fSnj2pPSgdbMdPDvs49a1XHaVvPVYDY
F1vk2+N+Nzt+ee6XFljupmj8bUhJPq+wyunFJsA5XiNsBKfOfOJyD/TRqqc3Ms5Z77Asrv7dDAsmdfJDsMd2
yNUE6L48PxZUOHZ8kYHfhfe+cg9Y/1cN8aUvvvTH9V5s1nfBpG8w8zTLxMwA4wCm67qL4+o9f9BsV08Qu9S0/mn
ZY4q6GTsZiIXWD3nwNY5NMEtNtiWcW6CAMfo3gKSmRXR/Ll8hBMGZKzcsZEERsdHsXOAj7ADfFf0yjaOcP95/J
WNgJiYVnK3A7MvPCq7FQ82YPUVRhqhzvKjlhzbUh4GtfHNkgW5yTt9wcn/eZpHfutx8fiJ3NcrmDhvpLIjL/YUQb
U7TsqH0rOIF/2Up2rnVfvC9ZpuwAVgozYYX4pJiHmWIpWF4VuXdyuOIxY3zAhDMeF8KI83C6QE5+s+Su
BrMYa4Et6UxdqSvM8f0a58L/jEpKhu6ruo44ZrdnX+4H8kMOadIpv5w2a7ISeVVT7qbPNnz6D+5Bp7g4v
YsMRSuUPtvX3gNv9L6qpebiwSeYsjhcUMd1UHDi9Ri8n64gk7dZsYlI+eNKyLwF3J3ac2e+V3xpfDvTdy3ZHC4w
EhlV0YdYCHyjxUtvx/7V1i4NFP+p5kpv7nzzVlnpjq7m5/1V1v1s0DsqG+nIf54kBf19vWiAO9ZPGCGRL/yCYtw
EJ4jidJsJ6pbuCBHXHbcAqqndEVdPAW2j9ywqfl/TnP3nvHm6c+QRSXG/GvDzmwH3Tgsr/19VZvu/GuWqBsyT1aH
RIR8rBaVvtZDoX5Xy7PH+UfZ7JdD7zNS3rvaTzD/zyE1GDmLnPQKBwbOxO8Z5Yx7R4ZuRH+VfcPD/4ISqt/ZhIKTk
Czr7rtHXJxG06XaAN6fP6/XlxDPDIeYYMK21T9vyXe6sW0f7HIYJv5Ll6fQvOIRIP3xD/fFlPr2tbHD/Fr3v98Hn6Dg
mOz5KN7t9AmQhW+TM5QtthX3n1sPf/n4qEHXBz+1Z7fnzCtnbf2EHO2XbRm1D82D35EnmI3C3mBZ+i8qXL69
mZZP1zbBoHaNNn6nH8fQ2NnAQHLGUHLmnNeN3UBjcDAWt2zvCcS4UxeEs7S+lUj/A9Ts9q1u5ln1lOkrRvcP
dy5+yrdXQXKnDuUIYr/K9oQ6sHpwxPPHK+vbO6EFU/IhSS6nTSQFdyzQ6hdWMCTSzpSZkwMp+s9w+Gjqk9Aj
jH6GCzqw3BkYmq4oRq+b6Qa0kEyWDdp9anixgqymZIFGcv41U9U7e8iEAuUpbAy47kQK85G5Rc8XIC8oq7i41v
pUlXHW/OFpfOMuYyeezwbCIAb3oM8s6M0sfN7a6ji71AJVFJkm08+Iok0d+/hMSa1Qr4LMh1L7vcO1CP5Xh
hvAmeSWJCN1KxCQl+QJtWpR+Z1B77/Bf9V/bfkl1DnPX/lmvlYf4wGXt7M8WByqOnVefbtlf3nYh+fjTjmzNe
5hvHnKxLbG0nsxy6MCb8Ev5F/VpQMc8Dcu1P+FV5f3h6nh9bf+f+Mbb4f/uGP8nn3YnC7/Jm5GXWcUlM8w7f
fzAn5rZr1h1HaZrRCkjUD9IfZUsBRLE+DQ3x5WYs0vpvCn9E+H+E7w0TebP9cDkf7M3Yq7b4nwB05Ac3/j8fE
Hrrl4zxdS+GYRGFWcoEYVbGBZ3Dbv3LQUk6+oG5cJbf3ehzz1Hkg/nEd6G+t17dMI4yMJQuJsz6t7fqg88kh76r
6PCiIC6qYgvk55y5+GUu3e+0rSXBSRFTpyFHCkuhsVB3KBPzKvbNi/XLsxCQYt7cVHkvP7fOq6nPy4OjYVZvV+iyt
Gt5x+N5nqUh7OyZfrYzCu3Ylq38LBeR6gcQrJnbpUPWtvqvRa4XXXWdMLjnbCfx7b7zB4b4OfHfKb5d++B3fPDO
nuNqdQOw3sKRLoMqTfW8P7Oqx1dy+4iqhz9UXfH2n5wgb7nKsNj0lGmwFeL3V/fNbWDkD0K73HTRnQCB3PWm

HbY5K8YM5dfjLJa6dfH0jysqramVlQvzk99tumx742s0ufHnwxlR/P7AI+GWPcnOTGVZ97OLNTDQfPDAvh
HDALNcZ4NLOQXllVNyX55cwuWpQkj10h69E8/tqrJGePMb6w+nGq6sQ5dndVZhd4ekFmR9Jvyuzc7idX
PfbeMcbHD3rsXXMu51vj8Z/VXz0zLIQjYBamql5SVauPMF+R5M41vuzjmZ0brukxXjnv/sYYX8rsKlWnjDFu
T/KpzE5tXLXqsd9RVUdPj33qU5zeuDrJW6bPn57kZXPs+uuZXT4SDokAs0jfneTi6Q2tG5OcnuT31/ia9yQ5
OsmNVXXL9PF6XJvZFa2S2ZHvzsxCnMyuRXtrks9Ob7r9RZ58FPv+JCdU1a1J/jCzq3jdt8Y+L0nyrulNQ2/Cs
WGuhsYRraq2JTl6jPHgFNNPJHnJmP07YbCpnNPiSHdckium0xSV5DzxZVkcAQM0cQ4YoIkAAzQRYIAmAg
zQRIABmvwfaX6rVjq62BUAAAAASUVORK5CYII=\n"
        },
        "metadata": {
          "needs_background": "light"
        }
       }
     ]
    },
    {
     "cell_type": "markdown",
     "source": [
      "6.Check for Categorical columns and perform encoding."
     ],
     "metadata": {
      "id": "9IrRiki0Mf0w"
     }
    },
    {
     "cell_type": "code",
     "source": [
      "data['Sex'].replace({'M':1,'F':0,'I':2},inplace=True)\n",
      "data"
     ],
     "metadata": {
      "colab": {
       "base_uri": "https://localhost:8080/",
       "height": 424
      },
      "id": "kV5TcpRyMXIh",
      "outputId": "a80314a0-af8a-4c32-8814-76e3be4ff040"
     },
     "execution_count": 52,
     "outputs": [
      {
       "output_type": "execute_result",
       "data": {
        "text/plain": [
         "   Sex Length Diameter Height Whole weight Shucked weight \\\n",
         "0   1   0.455   0.365   0.095   0.5140   0.2245   \n",
         "1   1   0.350   0.265   0.090   0.2255   0.0995   \n",
         "2   0   0.530   0.420   0.135   0.6770   0.2565   \n",
         "3   1   0.440   0.365   0.125   0.5160   0.2155   \n",
         "4   2   0.330   0.255   0.080   0.2050   0.0895   \n",
         "...   ...   .   \n",
         "4172   0   0.565   0.450   0.165   0.8870   0.3700   \n",
         "4173   1   0.590   0.440   0.135   0.8200   0.4390   \n",
         "4174   1   0.600   0.475   0.205   0.8200   0.5255   \n",
         "4175   0   0.625   0.485   0.150   0.8200   0.5310   \n",
         "4176   1   0.710   0.555   0.195   0.8200   0.3500   \n",
         "\n",
         "   Viscera weight Shell weight Rings \n",

```
 "0          0.1010       0.1500    15  \n",
 "1          0.0485       0.0700     7  \n",
 "2          0.1415       0.2100     9  \n",
 "3          0.1140       0.1550    10  \n",
 "4          0.0395       0.0550     7  \n",
 "...           ...          ...   ...  \n",
 "4172       0.2390       0.2490    11  \n",
 "4173       0.2145       0.2605    10  \n",
 "4174       0.2875       0.3080     9  \n",
 "4175       0.2610       0.2960    10  \n",
 "4176       0.3765       0.4950    12  \n",
 "\n",
 "[4177 rows x 9 columns]"
],
"text/html": [
 "\n",
 "  <div id=\"df-b249e7fd-f1eb-4e91-ac68-9b84b8e7f96c\">\n",
 "    <div class=\"colab-df-container\">\n",
 "      <div>\n",
 "<style scoped>\n",
 "    .dataframe tbody tr th:only-of-type {\n",
 "        vertical-align: middle;\n",
 "    }\n",
 "\n",
 "    .dataframe tbody tr th {\n",
 "        vertical-align: top;\n",
 "    }\n",
 "\n",
 "    .dataframe thead th {\n",
 "        text-align: right;\n",
 "    }\n",
 "</style>\n",
 "<table border=\"1\" class=\"dataframe\">\n",
 "  <thead>\n",
 "    <tr style=\"text-align: right;\">\n",
 "      <th></th>\n",
 "      <th>Sex</th>\n",
 "      <th>Length</th>\n",
 "      <th>Diameter</th>\n",
 "      <th>Height</th>\n",
 "      <th>Whole weight</th>\n",
 "      <th>Shucked weight</th>\n",
 "      <th>Viscera weight</th>\n",
 "      <th>Shell weight</th>\n",
 "      <th>Rings</th>\n",
 "    </tr>\n",
 "  </thead>\n",
 "  <tbody>\n",
 "    <tr>\n",
 "      <th>0</th>\n",
 "      <td>1</td>\n",
 "      <td>0.455</td>\n",
 "      <td>0.365</td>\n",
 "      <td>0.095</td>\n",
 "      <td>0.5140</td>\n",
 "      <td>0.2245</td>\n",
 "      <td>0.1010</td>\n",
```

```
"    <td>0.1500</td>\n",
"    <td>15</td>\n",
"  </tr>\n",
"  <tr>\n",
"    <th>1</th>\n",
"    <td>1</td>\n",
"    <td>0.350</td>\n",
"    <td>0.265</td>\n",
"    <td>0.090</td>\n",
"    <td>0.2255</td>\n",
"    <td>0.0995</td>\n",
"    <td>0.0485</td>\n",
"    <td>0.0700</td>\n",
"    <td>7</td>\n",
"  </tr>\n",
"  <tr>\n",
"    <th>2</th>\n",
"    <td>0</td>\n",
"    <td>0.530</td>\n",
"    <td>0.420</td>\n",
"    <td>0.135</td>\n",
"    <td>0.6770</td>\n",
"    <td>0.2565</td>\n",
"    <td>0.1415</td>\n",
"    <td>0.2100</td>\n",
"    <td>9</td>\n",
"  </tr>\n",
"  <tr>\n",
"    <th>3</th>\n",
"    <td>1</td>\n",
"    <td>0.440</td>\n",
"    <td>0.365</td>\n",
"    <td>0.125</td>\n",
"    <td>0.5160</td>\n",
"    <td>0.2155</td>\n",
"    <td>0.1140</td>\n",
"    <td>0.1550</td>\n",
"    <td>10</td>\n",
"  </tr>\n",
"  <tr>\n",
"    <th>4</th>\n",
"    <td>2</td>\n",
"    <td>0.330</td>\n",
"    <td>0.255</td>\n",
"    <td>0.080</td>\n",
"    <td>0.2050</td>\n",
"    <td>0.0895</td>\n",
"    <td>0.0395</td>\n",
"    <td>0.0550</td>\n",
"    <td>7</td>\n",
"  </tr>\n",
"  <tr>\n",
"    <th>...</th>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
```

```
"    <td>...</td>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
"    <td>...</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>4172</th>\n",
"    <td>0</td>\n",
"    <td>0.565</td>\n",
"    <td>0.450</td>\n",
"    <td>0.165</td>\n",
"    <td>0.8870</td>\n",
"    <td>0.3700</td>\n",
"    <td>0.2390</td>\n",
"    <td>0.2490</td>\n",
"    <td>11</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>4173</th>\n",
"    <td>1</td>\n",
"    <td>0.590</td>\n",
"    <td>0.440</td>\n",
"    <td>0.135</td>\n",
"    <td>0.8200</td>\n",
"    <td>0.4390</td>\n",
"    <td>0.2145</td>\n",
"    <td>0.2605</td>\n",
"    <td>10</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>4174</th>\n",
"    <td>1</td>\n",
"    <td>0.600</td>\n",
"    <td>0.475</td>\n",
"    <td>0.205</td>\n",
"    <td>0.8200</td>\n",
"    <td>0.5255</td>\n",
"    <td>0.2875</td>\n",
"    <td>0.3080</td>\n",
"    <td>9</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>4175</th>\n",
"    <td>0</td>\n",
"    <td>0.625</td>\n",
"    <td>0.485</td>\n",
"    <td>0.150</td>\n",
"    <td>0.8200</td>\n",
"    <td>0.5310</td>\n",
"    <td>0.2610</td>\n",
"    <td>0.2960</td>\n",
"    <td>10</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>4176</th>\n",
"    <td>1</td>\n",
```

```
"     <td>0.710</td>\n",
"     <td>0.555</td>\n",
"     <td>0.195</td>\n",
"     <td>0.8200</td>\n",
"     <td>0.3500</td>\n",
"     <td>0.3765</td>\n",
"     <td>0.4950</td>\n",
"     <td>12</td>\n",
"   </tr>\n",
"  </tbody>\n",
"</table>\n",
"<p>4177 rows × 9 columns</p>\n",
"</div>\n",
"     <button class=\"colab-df-convert\" onclick=\"convertToInteractive('df-b249e7fd-f1eb-
4e91-ac68-9b84b8e7f96c')\"\n",
"             title=\"Convert this dataframe to an interactive table.\"\n",
"             style=\"display:none;\">\n",
"       \n",
"  <svg xmlns=\"http://www.w3.org/2000/svg\" height=\"24px\"viewBox=\"0 0 24 24\"\n",
"       width=\"24px\">\n",
"    <path d=\"M0 0h24v24H0V0z\" fill=\"none\"/>\n",
"    <path d=\"M18.56 5.44l.94 2.06.94-2.06 2.06-.94-2.06-.94-.94-2.06-.94 2.06-2.06.94zm-11
1L8.5 8.5l.94-2.06 2.06-.94-2.06-.94L8.5 2.5l-.94 2.06-2.06.94zm10 10l.94 2.06.94-2.06 2.06-.94-2.06-
.94-.94-2.06-.94 2.06-2.06.94z\"/><path d=\"M17.41 7.96l-1.37-1.37c-.4-.4-.92-.59-1.43-.59-.52 0-
1.04.2-1.43.59L10.3 9.45l-7.72 7.72c-.78.78-.78 2.05 0 2.83L4 21.41c.39.39.9.59 1.41.59.51 0 1.02-.2
1.41-.59l7.78-7.78 2.81-2.81c.8-.78.8-2.07 0-2.86zM5.41 20L4 18.59l7.72-7.72 1.47 1.35L5.41
20z\"/>\n",
"  </svg>\n",
"     </button>\n",
"     \n",
"  <style>\n",
"    .colab-df-container {\n",
"      display:flex;\n",
"      flex-wrap:wrap;\n",
"      gap: 12px;\n",
"    }\n",
"\n",
"    .colab-df-convert {\n",
"      background-color: #E8F0FE;\n",
"      border: none;\n",
"      border-radius: 50%;\n",
"      cursor: pointer;\n",
"      display: none;\n",
"      fill: #1967D2;\n",
"      height: 32px;\n",
"      padding: 0 0 0 0;\n",
"      width: 32px;\n",
"    }\n",
"\n",
"    .colab-df-convert:hover {\n",
"      background-color: #E2EBFA;\n",
"      box-shadow: 0px 1px 2px rgba(60, 64, 67, 0.3), 0px 1px 3px 1px rgba(60, 64, 67, 0.15);\n",
"      fill: #174EA6;\n",
"    }\n",
"\n",
"    [theme=dark] .colab-df-convert {\n",
"      background-color: #3B4455;\n",
```

```
          "     fill: #D2E3FC;\n",
          "   }\n",
          "\n",
          "   [theme=dark] .colab-df-convert:hover {\n",
          "     background-color: #434B5C;\n",
          "     box-shadow: 0px 1px 3px 1px rgba(0, 0, 0, 0.15);\n",
          "     filter: drop-shadow(0px 1px 2px rgba(0, 0, 0, 0.3));\n",
          "     fill: #FFFFFF;\n",
          "   }\n",
          " </style>\n",
          "\n",
          "     <script>\n",
          "       const buttonEl =\n",
          "         document.querySelector('#df-b249e7fd-f1eb-4e91-ac68-9b84b8e7f96c button.colab-
df-convert');\n",
          "       buttonEl.style.display =\n",
          "         google.colab.kernel.accessAllowed ? 'block' : 'none';\n",
          "\n",
          "       async function convertToInteractive(key) {\n",
          "         const element = document.querySelector('#df-b249e7fd-f1eb-4e91-ac68-
9b84b8e7f96c');\n",
          "         const dataTable =\n",
          "           await google.colab.kernel.invokeFunction('convertToInteractive',\n",
          "                                                    [key], {});\n",
          "         if (!dataTable) return;\n",
          "\n",
          "         const docLinkHtml = 'Like what you see? Visit the ' +\n",
          "           '<a target=\"_blank\"
href=https://colab.research.google.com/notebooks/data_table.ipynb>data table notebook</a>'\n",
          "           + ' to learn more about interactive tables.';\n",
          "         element.innerHTML = '';\n",
          "         dataTable['output_type'] = 'display_data';\n",
          "         await google.colab.output.renderOutput(dataTable, element);\n",
          "         const docLink = document.createElement('div');\n",
          "         docLink.innerHTML = docLinkHtml;\n",
          "         element.appendChild(docLink);\n",
          "       }\n",
          "     </script>\n",
          "   </div>\n",
          " </div>\n",
          " "
        ]
       },
       "metadata": {},
       "execution_count": 52
     }
    ]
   },
   {
    "cell_type": "markdown",
    "source": [
     "7.Split the data into dependent and independent variables."
    ],
    "metadata": {
     "id": "-MlzJ9irMnQh"
    }
   },
```

```
{
 "cell_type": "code",
 "source": [
  "x=data.drop(columns= ['Rings'])\n",
  "y=data['Rings']\n",
  "x"
 ],
 "metadata": {
  "colab": {
   "base_uri": "https://localhost:8080/",
   "height": 424
  },
  "id": "SaU2UwioMje_",
  "outputId": "74958000-e017-4690-d4ed-d34c77b7aca1"
 },
 "execution_count": 53,
 "outputs": [
  {
   "output_type": "execute_result",
   "data": {
    "text/plain": [
     "      Sex  Length  Diameter  Height  Whole weight  Shucked weight  \\\n",
     "0       1   0.455     0.365   0.095        0.5140          0.2245   \n",
     "1       1   0.350     0.265   0.090        0.2255          0.0995   \n",
     "2       0   0.530     0.420   0.135        0.6770          0.2565   \n",
     "3       1   0.440     0.365   0.125        0.5160          0.2155   \n",
     "4       2   0.330     0.255   0.080        0.2050          0.0895   \n",
     "...   ...     ...       ...     ...           ...             ...   \n",
     "4172    0   0.565     0.450   0.165        0.8870          0.3700   \n",
     "4173    1   0.590     0.440   0.135        0.8200          0.4390   \n",
     "4174    1   0.600     0.475   0.205        0.8200          0.5255   \n",
     "4175    0   0.625     0.485   0.150        0.8200          0.5310   \n",
     "4176    1   0.710     0.555   0.195        0.8200          0.3500   \n",
     "\n",
     "      Viscera weight  Shell weight  \n",
     "0             0.1010        0.1500  \n",
     "1             0.0485        0.0700  \n",
     "2             0.1415        0.2100  \n",
     "3             0.1140        0.1550  \n",
     "4             0.0395        0.0550  \n",
     "...              ...           ...  \n",
     "4172          0.2390        0.2490  \n",
     "4173          0.2145        0.2605  \n",
     "4174          0.2875        0.3080  \n",
     "4175          0.2610        0.2960  \n",
     "4176          0.3765        0.4950  \n",
     "\n",
     "[4177 rows x 8 columns]"
    ],
    "text/html": [
     "\n",
     "  <div id=\"df-051146ce-7c7e-49d0-abd4-4e0ac3bffeee\">\n",
     "    <div class=\"colab-df-container\">\n",
     "      <div>\n",
     "<style scoped>\n",
     "    .dataframe tbody tr th:only-of-type {\n",
     "        vertical-align: middle;\n",
```

```
"    }\n",
"\n",
"    .dataframe tbody tr th {\n",
"        vertical-align: top;\n",
"    }\n",
"\n",
"    .dataframe thead th {\n",
"        text-align: right;\n",
"    }\n",
"</style>\n",
"<table border=\"1\" class=\"dataframe\">\n",
"  <thead>\n",
"    <tr style=\"text-align: right;\">\n",
"      <th></th>\n",
"      <th>Sex</th>\n",
"      <th>Length</th>\n",
"      <th>Diameter</th>\n",
"      <th>Height</th>\n",
"      <th>Whole weight</th>\n",
"      <th>Shucked weight</th>\n",
"      <th>Viscera weight</th>\n",
"      <th>Shell weight</th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>0</th>\n",
"      <td>1</td>\n",
"      <td>0.455</td>\n",
"      <td>0.365</td>\n",
"      <td>0.095</td>\n",
"      <td>0.5140</td>\n",
"      <td>0.2245</td>\n",
"      <td>0.1010</td>\n",
"      <td>0.1500</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>1</th>\n",
"      <td>1</td>\n",
"      <td>0.350</td>\n",
"      <td>0.265</td>\n",
"      <td>0.090</td>\n",
"      <td>0.2255</td>\n",
"      <td>0.0995</td>\n",
"      <td>0.0485</td>\n",
"      <td>0.0700</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>2</th>\n",
"      <td>0</td>\n",
"      <td>0.530</td>\n",
"      <td>0.420</td>\n",
"      <td>0.135</td>\n",
"      <td>0.6770</td>\n",
"      <td>0.2565</td>\n",
"      <td>0.1415</td>\n",
"      <td>0.2100</td>\n",
```

```
"   </tr>\n",
"   <tr>\n",
"     <th>3</th>\n",
"     <td>1</td>\n",
"     <td>0.440</td>\n",
"     <td>0.365</td>\n",
"     <td>0.125</td>\n",
"     <td>0.5160</td>\n",
"     <td>0.2155</td>\n",
"     <td>0.1140</td>\n",
"     <td>0.1550</td>\n",
"   </tr>\n",
"   <tr>\n",
"     <th>4</th>\n",
"     <td>2</td>\n",
"     <td>0.330</td>\n",
"     <td>0.255</td>\n",
"     <td>0.080</td>\n",
"     <td>0.2050</td>\n",
"     <td>0.0895</td>\n",
"     <td>0.0395</td>\n",
"     <td>0.0550</td>\n",
"   </tr>\n",
"   <tr>\n",
"     <th>...</th>\n",
"     <td>...</td>\n",
"     <td>...</td>\n",
"     <td>...</td>\n",
"     <td>...</td>\n",
"     <td>...</td>\n",
"     <td>...</td>\n",
"     <td>...</td>\n",
"     <td>...</td>\n",
"   </tr>\n",
"   <tr>\n",
"     <th>4172</th>\n",
"     <td>0</td>\n",
"     <td>0.565</td>\n",
"     <td>0.450</td>\n",
"     <td>0.165</td>\n",
"     <td>0.8870</td>\n",
"     <td>0.3700</td>\n",
"     <td>0.2390</td>\n",
"     <td>0.2490</td>\n",
"   </tr>\n",
"   <tr>\n",
"     <th>4173</th>\n",
"     <td>1</td>\n",
"     <td>0.590</td>\n",
"     <td>0.440</td>\n",
"     <td>0.135</td>\n",
"     <td>0.8200</td>\n",
"     <td>0.4390</td>\n",
"     <td>0.2145</td>\n",
"     <td>0.2605</td>\n",
"   </tr>\n",
"   <tr>\n",
```

```
"    <th>4174</th>\n",
"    <td>1</td>\n",
"    <td>0.600</td>\n",
"    <td>0.475</td>\n",
"    <td>0.205</td>\n",
"    <td>0.8200</td>\n",
"    <td>0.5255</td>\n",
"    <td>0.2875</td>\n",
"    <td>0.3080</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>4175</th>\n",
"    <td>0</td>\n",
"    <td>0.625</td>\n",
"    <td>0.485</td>\n",
"    <td>0.150</td>\n",
"    <td>0.8200</td>\n",
"    <td>0.5310</td>\n",
"    <td>0.2610</td>\n",
"    <td>0.2960</td>\n",
"   </tr>\n",
"   <tr>\n",
"    <th>4176</th>\n",
"    <td>1</td>\n",
"    <td>0.710</td>\n",
"    <td>0.555</td>\n",
"    <td>0.195</td>\n",
"    <td>0.8200</td>\n",
"    <td>0.3500</td>\n",
"    <td>0.3765</td>\n",
"    <td>0.4950</td>\n",
"   </tr>\n",
"  </tbody>\n",
"</table>\n",
"<p>4177 rows × 8 columns</p>\n",
"</div>\n",
"    <button class=\"colab-df-convert\" onclick=\"convertToInteractive('df-051146ce-7c7e-
49d0-abd4-4e0ac3bffeee')\"\n",
"            title=\"Convert this dataframe to an interactive table.\"\n",
"            style=\"display:none;\">\n",
"      \n",
"  <svg xmlns=\"http://www.w3.org/2000/svg\" height=\"24px\"viewBox=\"0 0 24 24\"\n",
"      width=\"24px\">\n",
"    <path d=\"M0 0h24v24H0V0z\" fill=\"none\"/>\n",
"    <path d=\"M18.56 5.44l.94 2.06.94-2.06 2.06-.94-2.06-.94-.94-2.06-.94 2.06-2.06.94zm-11
1L8.5 8.5l.94-2.06 2.06-.94-2.06-.94L8.5 2.5l-.94 2.06-2.06.94zm10 10l.94 2.06.94-2.06 2.06-.94-2.06-
.94-.94-2.06-.94 2.06-2.06.94z\"/><path d=\"M17.41 7.96l-1.37-1.37c-.4-.4-.92-.59-1.43-.59-.52 0-
1.04.2-1.43.59L10.3 9.45l-7.72 7.72c-.78.78-.78 2.05 0 2.83L4 21.41c.39.39.9.59 1.41.59.51 0 1.02-.2
1.41-.59l7.78-7.78 2.81-2.81c.8-.78.8-2.07 0-2.86zM5.41 20L4 18.59l7.72-7.72 1.47 1.35L5.41
20z\"/>\n",
"  </svg>\n",
"    </button>\n",
"    \n",
"  <style>\n",
"    .colab-df-container {\n",
"     display:flex;\n",
"     flex-wrap:wrap;\n",
```

```
"      gap: 12px;\n",
"    }\n",
"\n",
"    .colab-df-convert {\n",
"      background-color: #E8F0FE;\n",
"      border: none;\n",
"      border-radius: 50%;\n",
"      cursor: pointer;\n",
"      display: none;\n",
"      fill: #1967D2;\n",
"      height: 32px;\n",
"      padding: 0 0 0 0;\n",
"      width: 32px;\n",
"    }\n",
"\n",
"    .colab-df-convert:hover {\n",
"      background-color: #E2EBFA;\n",
"      box-shadow: 0px 1px 2px rgba(60, 64, 67, 0.3), 0px 1px 3px 1px rgba(60, 64, 67, 0.15);\n",
"      fill: #174EA6;\n",
"    }\n",
"\n",
"    [theme=dark] .colab-df-convert {\n",
"      background-color: #3B4455;\n",
"      fill: #D2E3FC;\n",
"    }\n",
"\n",
"    [theme=dark] .colab-df-convert:hover {\n",
"      background-color: #434B5C;\n",
"      box-shadow: 0px 1px 3px 1px rgba(0, 0, 0, 0.15);\n",
"      filter: drop-shadow(0px 1px 2px rgba(0, 0, 0, 0.3));\n",
"      fill: #FFFFFF;\n",
"    }\n",
"  </style>\n",
"\n",
"      <script>\n",
"        const buttonEl =\n",
"          document.querySelector('#df-051146ce-7c7e-49d0-abd4-4e0ac3bffeee button.colab-
df-convert');\n",
"        buttonEl.style.display =\n",
"          google.colab.kernel.accessAllowed ? 'block' : 'none';\n",
"\n",
"        async function convertToInteractive(key) {\n",
"          const element = document.querySelector('#df-051146ce-7c7e-49d0-abd4-
4e0ac3bffeee');\n",
"          const dataTable =\n",
"            await google.colab.kernel.invokeFunction('convertToInteractive',\n",
"                                                     [key], {});\n",
"          if (!dataTable) return;\n",
"\n",
"          const docLinkHtml = 'Like what you see? Visit the ' +\n",
"            '<a target=\"_blank\"
href=https://colab.research.google.com/notebooks/data_table.ipynb>data table notebook</a>'\n",
"            + ' to learn more about interactive tables.';\n",
"          element.innerHTML = '';\n",
"          dataTable['output_type'] = 'display_data';\n",
"          await google.colab.output.renderOutput(dataTable, element);\n",
"          const docLink = document.createElement('div');\n",
```

```
        "         docLink.innerHTML = docLinkHtml;\n",
        "         element.appendChild(docLink);\n",
        "       }\n",
        "     </script>\n",
        "    </div>\n",
        "  </div>\n",
        "  "
       ]
      },
      "metadata": {},
      "execution_count": 53
    }
   ]
  },
  {
   "cell_type": "code",
   "source": [
    "y"
   ],
   "metadata": {
    "colab": {
     "base_uri": "https://localhost:8080/"
    },
    "id": "G8pTyvtoMkSM",
    "outputId": "74cb72b4-9ce2-4907-ca08-0b3c67052c9c"
   },
   "execution_count": 54,
   "outputs": [
    {
     "output_type": "execute_result",
     "data": {
      "text/plain": [
       "0      15\n",
       "1       7\n",
       "2       9\n",
       "3      10\n",
       "4       7\n",
       "       ..\n",
       "4172    11\n",
       "4173    10\n",
       "4174     9\n",
       "4175    10\n",
       "4176    12\n",
       "Name: Rings, Length: 4177, dtype: int64"
      ]
     },
     "metadata": {},
     "execution_count": 54
    }
   ]
  },
  {
   "cell_type": "markdown",
   "source": [
    "8.Scale the independent variables"
   ],
   "metadata": {
```

```
   "id": "1ciRUvO_MzAd"
  }
 },
 {
  "cell_type": "code",
  "source": [
   "from sklearn.preprocessing import scale\n",
   "x = scale(x)\n",
   "x"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/"
   },
   "id": "WA_RHMSiMXTm",
   "outputId": "98d1f439-7980-4a04-ccd3-0f019add01da"
  },
  "execution_count": 55,
  "outputs": [
   {
    "output_type": "execute_result",
    "data": {
     "text/plain": [
      "array([[-0.0105225 , -0.67088921, -0.50179694, ..., -0.61037964,\n",
      "        -0.7328165 , -0.64358742],\n",
      "       [-0.0105225 , -1.61376082, -1.57304487, ..., -1.22513334,\n",
      "        -1.24343929, -1.25742181],\n",
      "       [-1.26630752,  0.00259051,  0.08738942, ..., -0.45300269,\n",
      "        -0.33890749, -0.18321163],\n",
      "       ...,\n",
      "       [-0.0105225 ,  0.63117159,  0.67657577, ...,  0.86994729,\n",
      "         1.08111018,  0.56873549],\n",
      "       [-1.26630752,  0.85566483,  0.78370057, ...,  0.89699645,\n",
      "         0.82336724,  0.47666033],\n",
      "       [-0.0105225 ,  1.61894185,  1.53357412, ...,  0.00683308,\n",
      "         1.94673739,  2.00357336]])"
     ]
    },
    "metadata": {},
    "execution_count": 55
   }
  ]
 },
 {
  "cell_type": "markdown",
  "source": [
   "9.Split the data into training and testing"
  ],
  "metadata": {
   "id": "K8mExkKxM4sX"
  }
 },
 {
  "cell_type": "code",
  "source": [
   "from sklearn.model_selection import train_test_split\n",
   "x_train, x_test, y_train, y_test = train_test_split(x,y, test_size = 0.2)\n",
```

```
    "print(x_train.shape, x_test.shape)"
   ],
   "metadata": {
    "colab": {
     "base_uri": "https://localhost:8080/"
    },
    "id": "1-Pg7rp9MXcm",
    "outputId": "18c61308-4e24-41c7-83fa-3f16faacb689"
   },
   "execution_count": 56,
   "outputs": [
    {
     "output_type": "stream",
     "name": "stdout",
     "text": [
      "(3341, 8) (836, 8)\n"
     ]
    }
   ]
  },
  {
   "cell_type": "markdown",
   "source": [
    "10.Build the Model"
   ],
   "metadata": {
    "id": "c4cbMwTLM_Hj"
   }
  },
  {
   "cell_type": "code",
   "source": [
    "from sklearn.linear_model import LinearRegression\n",
    "MLR=LinearRegression()"
   ],
   "metadata": {
    "id": "_AABm6ecM55Q"
   },
   "execution_count": 67,
   "outputs": []
  },
  {
   "cell_type": "markdown",
   "source": [
    "11.Train the model"
   ],
   "metadata": {
    "id": "gW_Qyi7BNFqP"
   }
  },
  {
   "cell_type": "code",
   "source": [
    "MLR.fit(x_train,y_train)"
   ],
   "metadata": {
    "colab": {
```

```
    "base_uri": "https://localhost:8080/"
   },
   "id": "2JVzgFI9M6E7",
   "outputId": "38be2107-4a7e-43e1-9e51-0364ed981ee3"
  },
  "execution_count": 68,
  "outputs": [
   {
    "output_type": "execute_result",
    "data": {
     "text/plain": [
      "LinearRegression()"
     ]
    },
    "metadata": {},
    "execution_count": 68
   }
  ]
 },
 {
  "cell_type": "markdown",
  "source": [
   "12.Test the model"
  ],
  "metadata": {
   "id": "sz9X0tYMNLHP"
  }
 },
 {
  "cell_type": "code",
  "source": [
   "y_pred=MLR.predict(x_test)\n",
   "y_pred"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/"
   },
   "id": "wQUjg3oxT6I1",
   "outputId": "5c59c567-0b4b-4f73-975c-5d9822e2b4d5"
  },
  "execution_count": 69,
  "outputs": [
   {
    "output_type": "execute_result",
    "data": {
     "text/plain": [
      "array([ 7.37557405,  9.51023631,  3.38615693, 10.05827349,  9.98059194,\n",
      "        9.6868931 ,  6.51546705, 11.44904922,  6.87713736,  8.20264894,\n",
      "       11.0046604 ,  9.69549071,  9.87583506, 13.28773937, 12.78174645,\n",
      "        7.46945597,  9.02853469,  7.17700273,  8.66739233, 10.14267135,\n",
      "       10.85046098, 10.16370791,  7.73602453, 10.19488858,  8.93814962,\n",
      "        9.9887505 ,  4.30831363, 11.7736472 , 12.33194689, 10.644838  ,\n",
      "        8.20522351,  7.37722948, 10.5786928 ,  9.75958467, 10.54264787,\n",
      "        6.26847307, 12.31203305, 12.92095537, 10.41736299, 13.55324781,\n",
      "       11.87891263, 10.29605286,  8.65345235, 13.91426047, 10.79429876,\n",
      "        7.10810285, 12.50374126,  8.96596113, 10.78819102, 10.51431772,\n",
```

"   10.05651463, 9.88308355, 10.61816318, 8.19127908, 10.03595012,\n",
"   7.57025099, 9.37371908, 10.93917348, 9.34106355, 8.64476032,\n",
"   9.16134212, 7.84559141, 9.46623005, 10.57541469, 6.13163541,\n",
"   15.73820675, 8.96275385, 8.03181477, 9.88534944, 11.6560106 ,\n",
"   10.45023102, 11.4010136 , 10.98208004, 6.50715719, 10.24741079,\n",
"   11.27745047, 10.61886761, 10.84092897, 8.8845912 , 7.75118187,\n",
"   7.48642597, 6.41013048, 7.09417055, 11.79451133, 10.90318693,\n",
"   11.32901152, 6.9640764 , 7.28908267, 11.83952112, 14.81228591,\n",
"   10.5658317 , 10.87041132, 14.88203848, 7.93520443, 11.07345683,\n",
"   7.08748219, 8.50506887, 10.56999613, 11.1037373 , 8.5131809 ,\n",
"   9.68761536, 6.37312606, 7.67086528, 11.24714847, 6.75783538,\n",
"   13.51394827, 6.72431492, 6.398321 , 11.42167647, 10.031311 ,\n",
"   13.4813016 , 9.98788154, 7.04990109, 7.02166074, 8.89132836,\n",
"   7.71279194, 6.391002 , 13.85682984, 7.34424706, 12.83346696,\n",
"   10.65224105, 10.43854773, 4.36979973, 9.38506655, 11.25134026,\n",
"   9.69569846, 10.55631318, 10.67327478, 7.82077679, 9.99466021,\n",
"   11.13176852, 6.83766713, 9.45064503, 8.49713476, 6.25408966,\n",
"   12.92869521, 11.28393558, 11.74402067, 9.01102537, 10.73781352,\n",
"   9.02490671, 11.328209 , 12.79846187, 11.47125942, 9.04040514,\n",
"   7.3210891 , 8.17938892, 11.21797672, 13.23156271, 12.23735284,\n",
"   8.6123118 , 9.22069621, 11.55234717, 8.61055912, 14.09454546,\n",
"   6.68287089, 12.6168128 , 11.1060093 , 14.12730256, 11.83281395,\n",
"   7.34410877, 7.60857448, 13.02774003, 13.88068968, 8.02517723,\n",
"   10.93575052, 8.88604512, 10.09371756, 6.79322191, 10.48657954,\n",
"   13.45134207, 8.34147219, 12.21296442, 10.27139117, 10.30806822,\n",
"   11.57510547, 13.65620084, 8.84183977, 7.78351017, 5.58058316,\n",
"   9.47129387, 7.63758317, 9.71658955, 10.27626511, 9.1563923 ,\n",
"   10.80407415, 10.47258565, 12.50089349, 12.6307782 , 11.12287373,\n",
"   11.36565331, 10.46436734, 6.37181725, 6.79966388, 11.53540797,\n",
"   11.3528444 , 9.11285018, 10.69205899, 9.32436139, 10.28860381,\n",
"   12.00448649, 10.18646538, 8.55321219, 10.5173056 , 10.02505561,\n",
"   9.43325187, 7.50011192, 9.31785402, 10.24712385, 11.80734114,\n",
"   6.84240842, 11.6213763 , 7.23211649, 6.96701815, 10.04148988,\n",
"   10.91483462, 8.84317459, 10.84942105, 10.94331702, 11.16760541,\n",
"   6.84194923, 8.53042679, 12.15820002, 12.45316071, 7.13550232,\n",
"   10.69555405, 12.45957485, 11.48648891, 10.29661998, 8.66669307,\n",
"   10.83018409, 6.37409029, 7.04543428, 9.21040134, 4.1104729 ,\n",
"   13.36004203, 11.54734748, 11.00196734, 11.51829363, 8.46727436,\n",
"   12.98643554, 6.89719007, 8.90099503, 9.55500414, 7.56504385,\n",
"   6.95514353, 8.74990706, 8.53994193, 6.44559416, 11.15115994,\n",
"   7.86336449, 10.69699483, 10.66147354, 9.50892755, 11.55362143,\n",
"   11.5362911 , 9.84204901, 10.03497013, 12.98254784, 9.84782637,\n",
"   10.24609195, 11.15855354, 8.52078821, 10.87448371, 11.54707413,\n",
"   10.63693478, 9.44518444, 10.64714126, 13.07855206, 8.39769592,\n",
"   9.74239867, 10.89584116, 10.17766924, 8.77687642, 6.61781924,\n",
"   9.90976403, 10.2900518 , 10.67119742, 8.95029365, 9.27113186,\n",
"   7.97930338, 10.79184609, 11.206365 , 10.96463271, 8.36357771,\n",
"   10.50944709, 7.43787746, 7.16741727, 7.35012563, 7.3866092 ,\n",
"   6.91182299, 11.21032794, 9.43546403, 10.32551552, 10.60945382,\n",
"   7.88237874, 12.34483384, 9.17645419, 9.97114777, 10.81870277,\n",
"   10.92301867, 10.56595968, 8.15497283, 10.78272441, 10.11238089,\n",
"   9.39164863, 12.98126702, 13.74740587, 8.14956865, 10.43474588,\n",
"   8.54454846, 10.30717063, 8.84230106, 8.75551438, 11.12181727,\n",
"   9.18201444, 11.40520602, 10.76311625, 7.72064911, 9.31056475,\n",
"   7.64259329, 12.61358938, 4.89074604, 9.77967701, 11.68304058,\n",
"   11.99108363, 13.29002545, 10.28378501, 6.6147381 , 15.65142531,\n",
"   10.56732294, 10.42417625, 10.61737961, 8.37263255, 5.90934145,\n",

"   8.50563444, 12.4312563 , 7.92662138, 10.97942102, 6.08365766,\n",
"   9.66261422, 10.19463053, 10.06644446, 6.90388037, 12.10564156,\n",
"   7.5666116 , 6.36402377, 9.67773521, 11.634775 , 12.15802621,\n",
"   12.00067911, 5.91352662, 5.789436 , 7.3821023 , 4.27682069,\n",
"   13.96375652, 7.83391122, 12.59479507, 8.40511361, 10.76308453,\n",
"   12.5698359 , 11.61301163, 9.71119215, 10.61853958, 9.73016615,\n",
"   9.48340523, 9.09614683, 6.19925378, 7.61924253, 13.06979263,\n",
"   11.80485787, 10.6137305 , 10.29009019, 9.7137153 , 10.46784671,\n",
"   9.81531862, 7.91605433, 8.37388282, 6.41498174, 10.08116132,\n",
"   9.35607603, 10.43199713, 7.86400446, 9.77703083, 10.56574055,\n",
"   10.42825862, 11.8905647 , 11.86694338, 10.8843761 , 9.28026859,\n",
"   10.68727125, 10.5885122 , 11.67318982, 11.95876917, 11.00399597,\n",
"   6.5415993 , 10.48165242, 13.41095764, 5.97044338, 11.09844905,\n",
"   7.88014507, 9.8398892 , 10.02983671, 8.72323077, 11.25032163,\n",
"   11.82287901, 11.46559083, 11.16437966, 7.36403125, 10.11934092,\n",
"   12.45754803, 9.08571864, 11.16725441, 7.26379273, 12.91393424,\n",
"   13.10368948, 7.76138308, 11.13683813, 10.48191455, 11.80149833,\n",
"   7.00512693, 8.81805445, 9.14265089, 10.52705143, 9.26273184,\n",
"   6.67155798, 8.72996562, 11.63973784, 11.61325205, 11.69269784,\n",
"   14.95884137, 9.46680511, 11.12146895, 11.39398099, 8.25315197,\n",
"   7.31444681, 11.54179175, 11.24051399, 12.02619722, 9.01875564,\n",
"   11.97659625, 6.90341836, 8.65333959, 6.65501914, 12.61863651,\n",
"   11.31234439, 6.9416827 , 10.29723772, 12.05789116, 12.44581262,\n",
"   12.25588953, 10.77461785, 7.27697225, 7.76038506, 8.85396944,\n",
"   7.70833137, 10.75847261, 12.14143825, 7.29361025, 7.37616884,\n",
"   10.75973984, 9.79304463, 11.97158963, 11.73658739, 6.4671405 ,\n",
"   9.74007164, 11.15166871, 10.88824394, 8.57120242, 10.35130009,\n",
"   11.00578476, 9.99031689, 9.60392217, 11.21307682, 10.94876439,\n",
"   10.51280954, 12.16674905, 10.80709373, 11.76318898, 11.35044122,\n",
"   7.28601793, 6.439484 , 11.74392497, 10.88263952, 8.70121385,\n",
"   10.73028621, 11.28083006, 12.05445271, 9.05732668, 12.95665514,\n",
"   7.93691691, 10.03907969, 7.32639496, 11.95984543, 9.23579718,\n",
"   9.87997265, 11.5610303 , 10.69220522, 7.04609596, 14.66088203,\n",
"   10.83578928, 8.02827994, 9.75598569, 6.80893705, 13.6614613 ,\n",
"   11.06322885, 8.13263508, 12.70374294, 11.51529459, 9.95613287,\n",
"   9.89463287, 9.86658364, 11.02224588, 8.86567251, 7.94258679,\n",
"   10.29716486, 8.70442147, 6.82613104, 8.04182574, 12.60248255,\n",
"   10.56600269, 6.4147952 , 9.79522383, 10.28341785, 12.80479255,\n",
"   12.11422416, 7.88025689, 9.10536141, 11.42189349, 13.4048793 ,\n",
"   8.39610751, 12.68701279, 14.04393323, 11.56881636, 8.65944216,\n",
"   9.70297823, 12.05598988, 10.78339818, 14.4475936 , 6.89939244,\n",
"   10.8383091 , 13.13542105, 10.05546016, 7.89025411, 12.36889824,\n",
"   8.66250882, 6.79699466, 13.30232501, 7.96273186, 7.85303065,\n",
"   11.57383601, 7.71942396, 7.06753893, 6.9654458 , 7.89345654,\n",
"   9.28666733, 13.09706437, 9.36393252, 11.21928567, 6.00905118,\n",
"   8.94596028, 8.67605812, 7.41211262, 12.5167409 , 9.3579582 ,\n",
"   11.00762932, 11.58322158, 7.76697393, 7.42145641, 8.94643335,\n",
"   9.4328286 , 11.24164727, 4.07106581, 12.74345735, 6.77820245,\n",
"   10.32435654, 7.17811545, 9.39599848, 11.81432163, 12.03276773,\n",
"   13.35395971, 9.82703247, 9.65849572, 11.09518211, 8.09714505,\n",
"   11.09964756, 7.92762637, 11.62753796, 10.40399346, 11.75985169,\n",
"   11.80169313, 11.24002507, 9.92920863, 10.79508425, 8.14007109,\n",
"   13.38980736, 12.10906339, 13.53048458, 7.89770368, 8.78517619,\n",
"   12.63076961, 13.79989894, 11.70298182, 7.55238632, 11.10076956,\n",
"   10.03697519, 10.02110208, 11.48111508, 13.44585508, 11.03836468,\n",
"   6.79875313, 8.9950584 , 7.94615101, 10.09250262, 9.47379734,\n",
"   11.22218051, 10.74318968, 9.55458955, 11.00229807, 10.96112205,\n",

```
        "      12.59284965,  8.64783235, 12.73980687, 12.68208708, 11.19883684,\n",
        "       7.77492315, 10.56889342,  6.21606921, 10.59748452,  6.5288247 ,\n",
        "       7.42908509, 11.80770853, 10.85499679,  8.09760136,  8.56570023,\n",
        "      10.60790699,  9.10913457, 12.56229073, 11.88016473,  7.22454286,\n",
        "      11.76857636, 11.91108306, 10.41279692, 13.05019398,  6.01971824,\n",
        "       9.64517414,  6.88993058, 12.15671158, 12.69004865,  8.63639585,\n",
        "      10.41224764,  7.75935449, 11.70737408,  7.19740139,  8.70681968,\n",
        "      10.58926553,  9.35246215, 11.08661523,  9.20477034, 12.70581214,\n",
        "       6.55464676,  8.60151767,  7.99768937,  6.65696362, 11.7719405 ,\n",
        "       8.20277575, 11.8038659 ,  9.58816514,  8.87137419,  3.81665421,\n",
        "       7.23363803, 13.64281976, 11.51748214,  8.338313  , 11.74517157,\n",
        "      10.35957834, 13.44095277, 11.34551809, 10.78002792,  6.69388042,\n",
        "      12.22620067,  8.38924319,  6.70981003,  9.91283716,  9.55451653,\n",
        "       6.81635194,  8.1220011 ,  6.0486068 ,  9.15147575,  7.79228945,\n",
        "      11.70185497,  9.86361948, 10.8801777 ,  6.27046511, 11.2488251 ,\n",
        "      10.26424846,  9.52639019, 12.58081901, 11.03421404, 11.40973923,\n",
        "      11.74297789, 12.30620072,  7.33398666,  8.36733163,  9.9723026 ,\n",
        "       8.16673146,  5.85655028, 11.19393624, 15.64819789, 12.62893684,\n",
        "      13.93304017,  8.85361729,  9.12168832,  9.59058465, 12.98800176,\n",
        "       7.50936848, 11.88845225, 11.49681791, 10.26423526,  7.46423776,\n",
        "      12.48126222, 12.34189445, 12.03236042,  5.79307592, 10.86780904,\n",
        "       8.9305906 ,  7.0917259 , 11.93508187,  7.42179953,  9.79046287,\n",
        "      10.97897846, 12.33604138, 12.09665806, 11.5136004 , 14.94124822,\n",
        "       9.92925381, 12.79073106, 10.23589952,  9.40883485, 10.07879178,\n",
        "      15.73205188, 11.044141  , 13.93762881, 10.27672627, 10.79261972,\n",
        "       7.69323081, 10.18249621,  8.80683398, 10.60629265, 10.03903145,\n",
        "       6.81012461,  8.70268219,  3.87466389, 10.98214977, 10.05246591,\n",
        "       9.59841632, 10.50538661, 11.11155222,  8.64591181,  9.48533547,\n",
        "      10.92466705,  9.57582687, 11.05417016,  6.93472389, 13.25521587,\n",
        "       8.51562155,  5.98737401, 11.29026679,  9.84470963,  9.83764543,\n",
        "      11.68207025, 10.53671768, 16.02170539, 11.73739607, 10.37373495,\n",
        "       8.08119284, 13.5318673 , 13.99649035,  9.75429528,  9.40044439,\n",
        "      12.40135235,  8.61154281,  6.25279525,  6.96336427, 10.96754063,\n",
        "      12.52074459,  6.85149344, 11.46610395, 11.95195086,  8.37007172,\n",
        "      11.37152343,  6.91173086, 11.54194445,  9.90457948, 14.58343316,\n",
        "       7.65365436, 10.80201645,  9.35112711, 11.7216643 , 10.22765525,\n",
        "       8.9005473 , 13.79526008, 11.36674524, 12.86489977,  8.30907261,\n",
        "      10.5868257 ,  7.04882802, 10.40882135,  9.88215064, 10.89854223,\n",
        "       8.87282378,  9.87820959, 11.84950454, 12.52262243, 14.19061047,\n",
        "      11.92134863, 10.97846285,  6.38989509,  9.18934346, 11.91624512,\n",
        "       7.40082133, 13.04162545,  6.83388227,  7.17031283, 11.80679718,\n",
        "      12.66007655,  7.76175618, 12.77745828, 10.81242128, 12.14688267,\n",
        "      10.1390414 ,  6.43470002,  6.57716791, 13.12346925, 10.5484577 ,\n",
        "      10.74101657])"
      ]
     },
     "metadata": {},
     "execution_count": 69
    }
   ]
  },
  {
   "cell_type": "code",
   "source": [
    "pred=MLR.predict(x_train)\n",
    "pred"
   ],
```

```
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/"
   },
   "id": "82Yg1thAM6Yh",
   "outputId": "80eb1e82-1738-4827-f93c-ca398b5714ae"
  },
  "execution_count": 70,
  "outputs": [
   {
    "output_type": "execute_result",
    "data": {
     "text/plain": [
      "array([10.29534681,  8.35110113, 13.08401836, ...,  8.01306518,\n",
      "       6.70521526,  7.92738339])"
     ]
    },
    "metadata": {},
    "execution_count": 70
   }
  ]
 },
 {
  "cell_type": "code",
  "source": [
   "from sklearn.metrics import r2_score\n",
   "accuracy=r2_score(y_test,y_pred)\n",
   "accuracy"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/"
   },
   "id": "DQMCylAANS7c",
   "outputId": "25772396-6b16-40cb-d590-7885146df9d3"
  },
  "execution_count": 71,
  "outputs": [
   {
    "output_type": "execute_result",
    "data": {
     "text/plain": [
      "0.4344618118979102"
     ]
    },
    "metadata": {},
    "execution_count": 71
   }
  ]
 },
 {
  "cell_type": "code",
  "source": [
   "MLR.predict([[1,0.455,0.365,0.095,0.5140,0.2245,0.1010,0.150]])"
  ],
  "metadata": {
   "colab": {
```

```
      "base_uri": "https://localhost:8080/"
     },
     "id": "QeQBJg7YNTKO",
     "outputId": "3c75a59b-95e2-4031-b1ed-e5366f42f4c5"
    },
    "execution_count": 72,
    "outputs": [
     {
      "output_type": "execute_result",
      "data": {
       "text/plain": [
        "array([9.9699696])"
       ]
      },
      "metadata": {},
      "execution_count": 72
     }
    ]
   },
   {
    "cell_type": "markdown",
    "source": [
     "13.Measure the performance using Metrics"
    ],
    "metadata": {
     "id": "_TE4rdLCNYgU"
    }
   },
   {
    "cell_type": "code",
    "source": [
     "from sklearn import metrics\n",
     "from sklearn.metrics import mean_squared_error\n",
     "np.sqrt(mean_squared_error(y_test,y_pred))"
    ],
    "metadata": {
     "colab": {
      "base_uri": "https://localhost:8080/"
     },
     "id": "s7kKPPCFNTUA",
     "outputId": "125c8323-1352-4de4-fd32-5437d0cf8af5"
    },
    "execution_count": 73,
    "outputs": [
     {
      "output_type": "execute_result",
      "data": {
       "text/plain": [
        "2.3175048063910206"
       ]
      },
      "metadata": {},
      "execution_count": 73
     }
    ]
   },
   {
```

```
 "cell_type": "markdown",
 "source": [
  "LASSO"
 ],
 "metadata": {
  "id": "5xKKCACFNhZk"
 }
},
{
 "cell_type": "code",
 "source": [
  "from sklearn.linear_model import Lasso, Ridge\n",
  "#intialising model\n",
  "lso=Lasso(alpha=0.01,normalize=True)\n",
  "#fit the model\n",
  "lso.fit(x_train,y_train)\n",
  "Lasso(alpha=0.01, normalize=True)\n",
  "#prediction on test data\n",
  "lso_pred=lso.predict(x_test)\n",
  "#coef\n",
  "coef=lso.coef_\n",
  "coef"
 ],
 "metadata": {
  "colab": {
   "base_uri": "https://localhost:8080/"
  },
  "id": "y2qHNDOgNTdP",
  "outputId": "0c9d84c1-4ca1-4261-cb09-8e0264c00eb2"
 },
 "execution_count": 74,
 "outputs": [
  {
   "output_type": "execute_result",
   "data": {
    "text/plain": [
     "array([-0.       ,  0.       ,  0.       ,  0.44854202,  0.17166665,\n",
     "        0.       ,  0.       ,  0.85360448])"
    ]
   },
   "metadata": {},
   "execution_count": 74
  }
 ]
},
{
 "cell_type": "code",
 "source": [
  "from sklearn import metrics\n",
  "from sklearn.metrics import mean_squared_error\n",
  "metrics.r2_score(y_test,lso_pred)"
 ],
 "metadata": {
  "colab": {
   "base_uri": "https://localhost:8080/"
  },
  "id": "4ypokcKwNpBe",
```

```
    "outputId": "dd0056f3-6383-4dad-d672-e8a07329b519"
   },
   "execution_count": 75,
   "outputs": [
    {
     "output_type": "execute_result",
     "data": {
      "text/plain": [
       "0.35085419108542304"
      ]
     },
     "metadata": {},
     "execution_count": 75
    }
   ]
  },
  {
   "cell_type": "code",
   "source": [
    "np.sqrt(mean_squared_error(y_test,lso_pred))"
   ],
   "metadata": {
    "colab": {
     "base_uri": "https://localhost:8080/"
    },
    "id": "XBqN4I6NNpNb",
    "outputId": "de199748-b120-4f3c-dba5-be9649ca63d7"
   },
   "execution_count": 76,
   "outputs": [
    {
     "output_type": "execute_result",
     "data": {
      "text/plain": [
       "2.4829090086710326"
      ]
     },
     "metadata": {},
     "execution_count": 76
    }
   ]
  },
  {
   "cell_type": "markdown",
   "source": [
    "RIDGE"
   ],
   "metadata": {
    "id": "DFfM4FT9Nube"
   }
  },
  {
   "cell_type": "code",
   "source": [
    "#initialising model\n",
    "rg=Ridge(alpha=0.01,normalize=True)\n",
    "#fit the model\n",
```

```
 "rg.fit(x_train,y_train)\n",
 "Ridge(alpha=0.01, normalize=True)\n",
 "#prediction\n",
 "rg_pred=rg.predict(x_test)\n",
 "rg_pred"
],
"metadata": {
 "colab": {
  "base_uri": "https://localhost:8080/"
 },
 "id": "KVPD1gK1NpX9",
 "outputId": "16e274c4-8049-44ea-f02c-2321e775808b"
},
"execution_count": 77,
"outputs": [
 {
  "output_type": "execute_result",
  "data": {
   "text/plain": [
    "array([ 7.37696174,  9.43028906,  3.85261587, 10.17985369,  9.95372139,\n",
    "        9.64419897,  6.51852402, 11.43765567,  6.89913354,  8.24890111,\n",
    "       11.05123472,  9.79399982,  9.88026554, 13.14754645, 12.69150858,\n",
    "        7.4533555 ,  9.02029328,  7.19863182,  8.68561723, 10.17660049,\n",
    "       10.92510835, 10.18517004,  7.72339746, 10.21688816,  8.93940881,\n",
    "       10.10196815,  4.44955902, 11.73088905, 12.20492787, 10.65380783,\n",
    "        8.23195611,  7.34376161, 10.60408588,  9.75118309, 10.62571705,\n",
    "        6.26949166, 12.32187714, 12.82170516, 10.48885401, 13.44513031,\n",
    "       11.82989977, 10.21629639,  8.69582624, 13.81416228, 10.83223396,\n",
    "        7.13416616, 12.42244522,  9.16797457, 10.82643002, 10.54680742,\n",
    "       10.19128062,  9.85890533, 10.582181  ,  8.2559355 , 10.11659944,\n",
    "        7.59731316,  9.38491259, 10.93333019,  9.32334557,  8.66968818,\n",
    "        9.37883112,  7.84085165,  9.53724796, 10.56126664,  6.10182475,\n",
    "       15.53196561,  9.17623972,  7.98251188,  9.98277037, 11.60660463,\n",
    "       10.42232937, 11.43202037, 10.9500637 ,  6.46913224, 10.26537563,\n",
    "       11.29542702, 10.64197135, 10.77860294,  8.90696973,  7.72885538,\n",
    "        7.52296939,  6.40294377,  7.09649566, 11.81203421, 10.96433488,\n",
    "       11.32768731,  6.96188845,  7.32782501, 11.93516743, 14.57803197,\n",
    "       10.62354034, 10.93772804, 14.77683706,  7.91496092, 11.14817236,\n",
    "        7.0802035 ,  8.48298544, 10.50560297, 11.07776253,  8.54564705,\n",
    "        9.66459164,  6.38443924,  7.66665616, 11.23937868,  6.75146727,\n",
    "       13.32104734,  6.78340909,  6.53939205, 11.3502521 , 10.02033903,\n",
    "       13.35549523,  9.94315723,  7.07214655,  7.03967866,  9.05863938,\n",
    "        7.74624884,  6.37546261, 13.79082025,  7.33856632, 12.83234831,\n",
    "       10.55484651, 10.41321507,  4.49929243,  9.47956477, 11.27068316,\n",
    "        9.6500175 , 10.55331391, 10.61621544,  7.89076648,  9.99084303,\n",
    "       11.14165923,  6.85083475,  9.41981952,  8.51261606,  6.24067427,\n",
    "       12.88143447, 11.30090605, 11.72706852,  9.05540961, 10.79404181,\n",
    "        9.02033788, 11.26839996, 12.72763956, 11.43239976,  9.01726193,\n",
    "        7.32434168,  8.12945589, 11.18788673, 13.07758082, 12.14363369,\n",
    "        8.66283765,  9.22983741, 11.59702264,  8.70641205, 13.93296408,\n",
    "        6.69705163, 12.55754884, 11.04421134, 13.995521  , 11.7638164 ,\n",
    "        7.67526326,  7.77962498, 12.9884769 , 13.91564162,  8.06283229,\n",
    "       10.96967565,  8.88222016, 10.05246971,  6.81026157, 10.5131249 ,\n",
    "       13.38833751,  8.31318668, 12.25411698, 10.37094813, 10.4456003 ,\n",
    "       11.47883266, 13.52409618,  8.91868334,  7.73509567,  5.55110211,\n",
    "        9.5179989 ,  7.60854956,  9.76772527, 10.25323078,  9.16148311,\n",
    "       10.83370672, 10.4826236 , 12.48741698, 12.63022039, 11.11737905,\n",
```

```
"     11.36757692, 10.60412151,  6.38689577,  6.84415793, 11.46576805,\n",
"     11.28768293,  9.09069904, 10.64745697,  9.35685947, 10.3105461 ,\n",
"     12.00957903, 10.24358329,  8.53836366, 10.57791537, 10.10477481,\n",
"      9.48544327,  7.51615897,  9.32699137, 10.34076247, 11.71202878,\n",
"      6.8320723 , 11.59825308,  7.24440046,  6.95316334, 10.05358937,\n",
"     10.89673992,  8.84177908, 10.86425201, 10.98633676, 11.13393026,\n",
"      6.81405563,  8.57147731, 12.06530428, 12.32751947,  7.09664798,\n",
"     10.69380457, 12.45678065, 11.55085336, 10.30452988,  8.65159664,\n",
"     10.882239  ,  6.51562957,  7.05221132,  9.11831417,  4.24628782,\n",
"     13.21623117, 11.50718107, 10.94472761, 11.43487464,  8.47705867,\n",
"     12.8443623 ,  6.93607896,  8.89239175,  9.49508198,  7.58998382,\n",
"      6.91857894,  8.79943284,  8.55737245,  6.43718306, 11.16213197,\n",
"      7.83563453, 10.7203552 , 10.6065916 ,  9.45854911, 11.54513073,\n",
"     11.51650133,  9.8641762 , 10.02881511, 12.88392061,  9.79610916,\n",
"     10.30483995, 11.1112412 ,  8.54833738, 10.90174418, 11.53106033,\n",
"     10.65224493,  9.46610582, 10.72992596, 12.93046816,  8.43095239,\n",
"      9.98067209, 10.94327771, 10.31448405,  8.79709701,  6.68587437,\n",
"      9.94888269, 10.25184899, 10.70592832,  8.96817581,  9.35980717,\n",
"      7.98143412, 10.73659055, 11.06088565, 11.02398068,  8.4021402 ,\n",
"     10.52013487,  7.51747621,  7.2138413 ,  7.36871525,  7.35654881,\n",
"      6.93482903, 11.22658866,  9.40590542, 10.35485114, 10.66473042,\n",
"      7.8785433 , 12.18240828,  9.2039649 , 10.01607111, 10.79034477,\n",
"     10.96552547, 10.56747262,  8.18162573, 10.86500071, 10.15187891,\n",
"      9.44614448, 12.91039204, 13.6022971 ,  8.14336852, 10.44509289,\n",
"      8.54330737, 10.41095685,  8.88914701,  8.74573764, 11.10667256,\n",
"      9.3043094 , 11.36844321, 10.7877114 ,  7.71539724,  9.31842799,\n",
"      7.67486771, 12.56916372,  4.99646498,  9.86875286, 11.71231223,\n",
"     11.86973249, 13.16865562, 10.30829974,  6.62916963, 15.43889092,\n",
"     10.61602182, 10.4050968 , 10.64883336,  8.65005106,  5.89262539,\n",
"      8.49043732, 12.45615177,  7.94720773, 11.09769557,  6.04005749,\n",
"      9.65469568, 10.23935265, 10.19007039,  6.93735172, 12.02906434,\n",
"      7.59100205,  6.3245966 ,  9.81733474, 11.67546166, 12.14058021,\n",
"     11.99189323,  5.88047591,  5.78537068,  7.41260169,  4.41095045,\n",
"     13.94927762,  7.81485763, 12.48177967,  8.41511555, 10.86662508,\n",
"     12.53024558, 11.73323171,  9.74593813, 10.64302499,  9.64270999,\n",
"      9.52579861,  9.14249912,  6.17467703,  7.63303527, 12.93873363,\n",
"     11.78706619, 10.61367288, 10.36361772,  9.73129239, 10.49696267,\n",
"      9.85052926,  7.9215296 ,  8.39812202,  6.41050375, 10.1604486 ,\n",
"      9.47588562, 10.52951433,  7.86428275,  9.79641354, 10.54721279,\n",
"     10.3704058 , 11.93329511, 11.85686833, 10.95987008,  9.31321945,\n",
"     10.68272343, 10.64494154, 11.63110495, 11.90116774, 10.91938554,\n",
"      6.52008783, 10.45631729, 13.32023399,  5.97414495, 11.13248117,\n",
"      7.88629321,  9.83054254, 10.14757102,  8.71572792, 11.24714128,\n",
"     11.71752201, 11.40362406, 11.30786554,  7.35024051, 10.11482492,\n",
"     12.36985942,  9.09043678, 11.16718494,  7.29098876, 12.83648965,\n",
"     13.00106874,  7.75091245, 11.16236723, 10.43875723, 11.76067515,\n",
"      7.01955578,  8.84868069,  9.22672937, 10.58494103,  9.27258043,\n",
"      6.66248817,  8.75429894, 11.60370103, 11.59067779, 11.79017638,\n",
"     14.79228494,  9.59810674, 11.15376649, 11.27544251,  8.15022122,\n",
"      7.33081463, 11.50533155, 11.2529936 , 11.98940294,  9.03611333,\n",
"     11.99119321,  6.90778659,  8.6515863 ,  6.62973426, 12.56879376,\n",
"     11.30765359,  6.91121331, 10.27438752, 12.040227  , 12.40320177,\n",
"     12.18381662, 10.81306597,  7.3060963 ,  8.03747127,  8.85846384,\n",
"      7.68032879, 10.7676787 , 12.09929498,  7.26334211,  7.40568967,\n",
"     10.69713929,  9.83547954, 11.99550043, 11.76769972,  6.44780894,\n",
"      9.83932173, 11.19097289, 10.88591501,  8.52527988, 10.37211154,\n",
"     10.98635536,  9.94297064,  9.71522242, 11.19805545, 10.9435234 ,\n",
```

```
"      10.5149969 , 12.13961498, 10.80641473, 11.80967122, 11.31780139,\n",
"      7.34105836,  6.46367135, 11.67638432, 10.88900093,  8.74188351,\n",
"      10.70805004, 11.28687355, 12.03864058,  9.07580374, 12.85737152,\n",
"      7.91736341, 10.08159248,  7.32059455, 11.8352947 ,  9.22761971,\n",
"      9.83407679, 11.58740761, 10.80106955,  7.06562235, 14.5163812 ,\n",
"      10.88454301,  8.01374974,  9.73022883,  6.84667116, 13.56010616,\n",
"      11.0861618 ,  8.17075241, 12.5893473 , 11.50069361,  9.95010457,\n",
"      9.94990542,  9.82633655, 11.07828269,  8.86635284,  7.96787007,\n",
"      10.3473789 ,  8.69357385,  6.83867145,  8.09496865, 12.49918933,\n",
"      10.6215575 ,  6.46057541,  9.80098083, 10.41756852, 12.76397304,\n",
"      12.16212914,  7.86365914,  9.11882804, 11.3407022 , 13.23536896,\n",
"      8.41091789, 12.70102658, 13.94214116, 11.67218781,  9.00638673,\n",
"      9.68070524, 11.94363126, 10.85570357, 14.25980254,  6.94525011,\n",
"      10.89805833, 13.0093944 , 10.02344369,  7.88971634, 12.32448574,\n",
"      8.67781265,  6.80901523, 13.19486793,  7.97460917,  7.9082475 ,\n",
"      11.54867359,  7.74364521,  7.095187 ,  6.97345883,  7.9007156 ,\n",
"      9.21144805, 13.01591976,  9.33396934, 11.21794289,  5.98762549,\n",
"      8.99522758,  8.74250741,  7.43110504, 12.51456645,  9.34356189,\n",
"      10.98721279, 11.50902027,  7.79655132,  7.46205421,  8.98366556,\n",
"      9.41241468, 11.18631714,  4.20209358, 12.67744661,  6.78245662,\n",
"      10.25488494,  7.21987737,  9.59288926, 11.72204677, 12.05974312,\n",
"      13.27102119,  9.83846879,  9.62646975, 11.05050323,  8.13418101,\n",
"      11.20600795,  7.90722483, 11.50889437, 10.39271019, 11.7666626 ,\n",
"      11.89386794, 11.21042167,  9.97747803, 10.78417454,  8.15786284,\n",
"      13.27776625, 12.07474908, 13.44657525,  7.91732622,  8.81898647,\n",
"      12.6039094 , 13.66931531, 11.60812039,  7.55316304, 11.12430462,\n",
"      10.10029421, 10.02245852, 11.44812722, 13.34706485, 11.08066703,\n",
"      6.77916668,  8.95305579,  7.98310569, 10.19396325,  9.47364458,\n",
"      11.25276429, 10.70527666,  9.55637889, 10.99997917, 10.82780396,\n",
"      12.64243913,  8.64242571, 12.74401773, 12.60737007, 11.18503356,\n",
"      7.79565896, 10.50701234,  6.20383167, 10.61970497,  6.5638943 ,\n",
"      7.45620167, 11.82382148, 10.893564 ,  8.09972513,  8.59190627,\n",
"      10.67994999,  9.06949153, 12.50685307, 11.84422072,  7.22774622,\n",
"      11.6698495 , 11.89313622, 10.39905007, 12.89186579,  5.98411738,\n",
"      9.80589517,  6.91722137, 12.21951292, 12.61168838,  8.64218312,\n",
"      10.4287115 ,  7.79246282, 11.64290801,  7.25063339,  8.7362117 ,\n",
"      10.58493427,  9.3735494 , 11.01788849,  9.21148741, 12.62259774,\n",
"      6.6040002 ,  8.62053845,  7.99464256,  6.63669984, 11.76261571,\n",
"      8.16764357, 11.82255837,  9.58558495,  8.83610498,  4.27517832,\n",
"      7.28856135, 13.47826876, 11.41478743,  8.39754004, 11.74474393,\n",
"      10.46330811, 13.3953835 , 11.33650737, 10.82780447,  6.74461207,\n",
"      12.12682036,  8.38292814,  6.68692447,  9.87595621,  9.62595991,\n",
"      6.81051956,  8.14430513,  6.03963871,  9.19444722,  7.79707055,\n",
"      11.77744895,  9.79196935, 10.80898767,  6.26126433, 11.24211165,\n",
"      10.24921114,  9.48756348, 12.56642721, 10.97688591, 11.40500569,\n",
"      11.69702073, 12.25910081,  7.3056927 ,  8.39537107, 10.09721615,\n",
"      8.17859061,  5.84821067, 11.12900287, 15.44232389, 12.54547001,\n",
"      13.82469244,  8.83587899,  9.16399226,  9.56266741, 12.96735764,\n",
"      7.50566848, 11.86060519, 11.50975281, 10.30435979,  7.49321636,\n",
"      12.42479135, 12.24039548, 12.00070633,  5.77997563, 10.85360216,\n",
"      9.20254122,  7.09059348, 11.95909165,  7.42670895,  9.79866694,\n",
"      10.96162768, 12.24029669, 12.01035668, 11.44809886, 14.7828305 ,\n",
"      10.03925807, 12.757623  , 10.26913523,  9.39492194, 10.0589669 ,\n",
"      15.53893643, 10.95497943, 13.74621138, 10.18721606, 10.79994452,\n",
"      7.70416345, 10.18937334,  8.82341964, 10.64546844, 10.15386631,\n",
"      6.81920134,  8.69982279,  4.01063797, 10.99495196, 10.18701868,\n",
"      9.62886284, 10.48102227, 11.19154401,  8.65326889,  9.49231486,\n",
```

```
        "      10.92961948,  9.57843041, 10.92533834,  6.91688894, 13.08432148,\n",
        "       8.56745669,  5.95989605, 11.30145342,  9.91060771,  9.89634757,\n",
        "      11.68976144, 10.63050696, 15.82254961, 11.70093197, 10.31397885,\n",
        "       8.08066109, 13.38778129, 13.84287563,  9.91125101,  9.37273582,\n",
        "      12.39523   ,  8.65355216,  6.23813166,  6.97125445, 11.06864822,\n",
        "      12.57808182,  6.85509098, 11.40596628, 11.9162912 ,  8.36968214,\n",
        "      11.36586766,  6.90620836, 11.52403431,  9.92667018, 14.49228482,\n",
        "       7.6876604 , 10.78488382,  9.40560461, 11.70361955, 10.279704  ,\n",
        "       8.89793279, 13.67040456, 11.39061756, 12.87132144,  8.30561466,\n",
        "      10.58186795,  7.033647  , 10.40555648,  9.90102713, 10.95824411,\n",
        "       8.87327951,  9.85464389, 11.8335212 , 12.53936052, 14.10314802,\n",
        "      11.96986242, 10.87771325,  6.53074784,  9.18882648, 11.87834835,\n",
        "       7.73492869, 12.89495762,  6.83366157,  7.17693917, 11.8060456 ,\n",
        "      12.54195885,  7.80179928, 12.78866485, 10.85465367, 12.11996103,\n",
        "      10.08723184,  6.39063058,  6.54851831, 13.05225671, 10.61390885,\n",
        "      10.67160979])"
      ]
     },
     "metadata": {},
     "execution_count": 77
    }
   ]
  },
  {
   "cell_type": "code",
   "source": [
    "rg.coef_"
   ],
   "metadata": {
    "colab": {
     "base_uri": "https://localhost:8080/"
    },
    "id": "4dsYfSVyNzj9",
    "outputId": "647649d4-71c0-412a-c3b5-278570328fc5"
   },
   "execution_count": 78,
   "outputs": [
    {
     "output_type": "execute_result",
     "data": {
      "text/plain": [
       "array([-0.30491658, -0.73854734,  0.25645295,  0.94974047,  1.00971419,\n",
       "       -1.41068116, -0.12705181,  1.84892398])"
      ]
     },
     "metadata": {},
     "execution_count": 78
    }
   ]
  },
  {
   "cell_type": "code",
   "source": [
    "metrics.r2_score(y_test,rg_pred)"
   ],
   "metadata": {
    "colab": {
```

```
        "base_uri": "https://localhost:8080/"
       },
       "id": "2L1sbxadNzyJ",
       "outputId": "91a0ad3a-9fe1-4f7d-cb5c-4a9907db2453"
      },
      "execution_count": 79,
      "outputs": [
       {
        "output_type": "execute_result",
        "data": {
         "text/plain": [
          "0.4360320462605731"
         ]
        },
        "metadata": {},
        "execution_count": 79
       }
      ]
     },
     {
      "cell_type": "code",
      "source": [
       "np.sqrt(mean_squared_error(y_test,rg_pred))"
      ],
      "metadata": {
       "colab": {
        "base_uri": "https://localhost:8080/"
       },
       "id": "qnqlyB1DNz2E",
       "outputId": "6d52daef-9dd8-4798-a800-eb0a3ea0303b"
      },
      "execution_count": 80,
      "outputs": [
       {
        "output_type": "execute_result",
        "data": {
         "text/plain": [
          "2.314285257968791"
         ]
        },
        "metadata": {},
        "execution_count": 80
       }
      ]
     }
    ]
}
```