In [1]:
```python
import matplotlib.pyplot as plt
```

In [2]:
```python
plt.plot([1,2], [3,10])
```
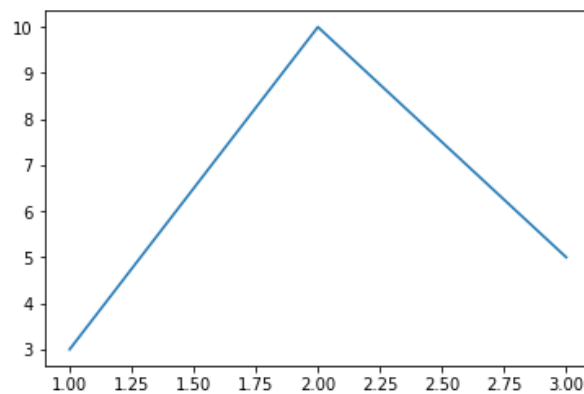
Out[2]: [<matplotlib.lines.Line2D at 0x112625898>]

In [29]:
```python
plt.plot([1,2,3], [3,10,5])
```
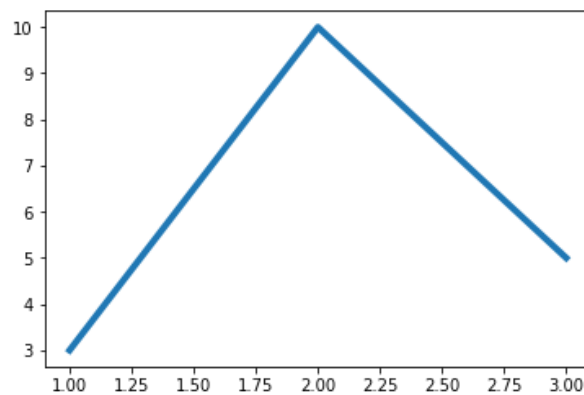
Out[29]: [<matplotlib.lines.Line2D at 0x1178f99b0>]
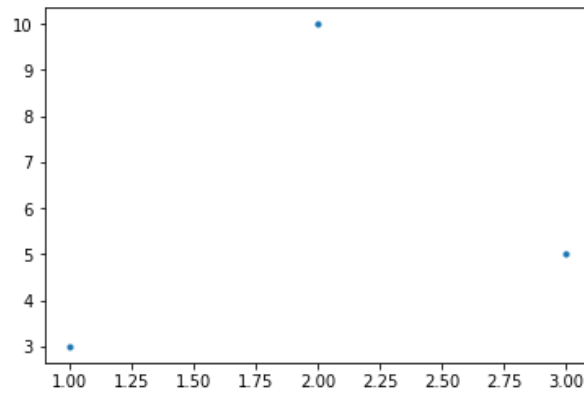
In [30]:
```python
plt.plot([1,2,3], [3,10,5], linewidth=4)
```
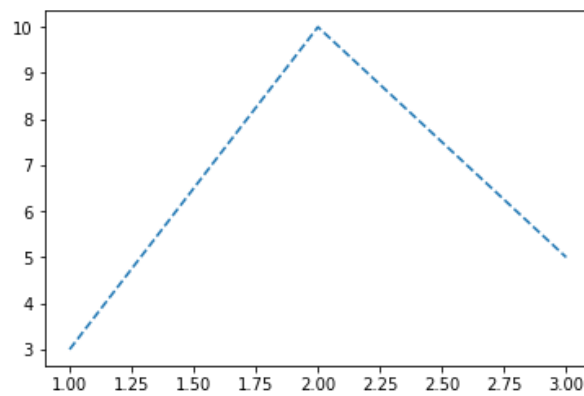
Out[30]: [<matplotlib.lines.Line2D at 0x117a1f208>]

In [5]: `plt.plot([1,2,3], [3,10,5], '.')`

Out[5]: `[<matplotlib.lines.Line2D at 0x1128abda0>]`

In [7]: `plt.plot([1,2,3], [3,10,5], '--')`

Out[7]: `[<matplotlib.lines.Line2D at 0x1129df3c8>]`

In [13]: `plt.plot([1,2,3], [3,10,5], '-.')`

Out[13]: `[<matplotlib.lines.Line2D at 0x112f81cf8>]`
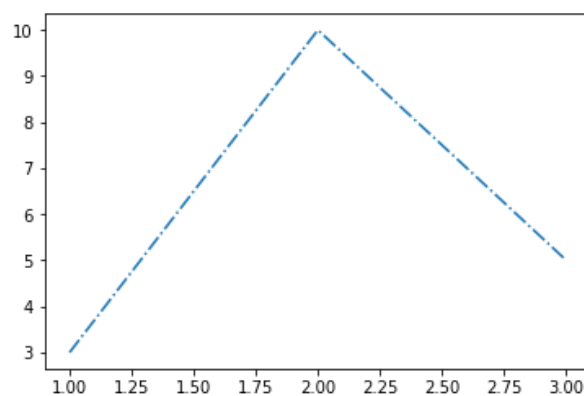
In [16]: `plt.plot([1,2,3], [3,10,5], '-.')`

Out[16]: [<matplotlib.lines.Line2D at 0x1170f4cf8>]
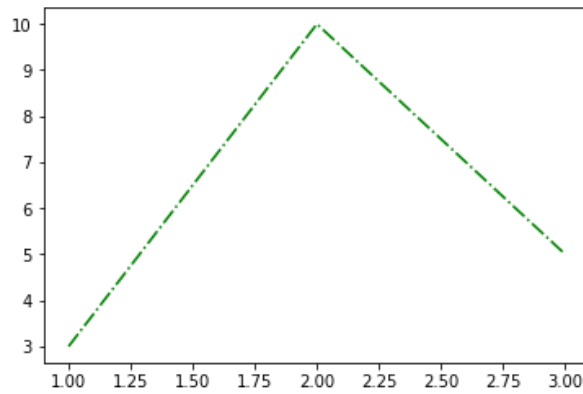
In [31]: `plt.plot([1,2,3], [3,10,5], '-.', c='palegreen')`

Out[31]: [<matplotlib.lines.Line2D at 0x117a80ba8>]
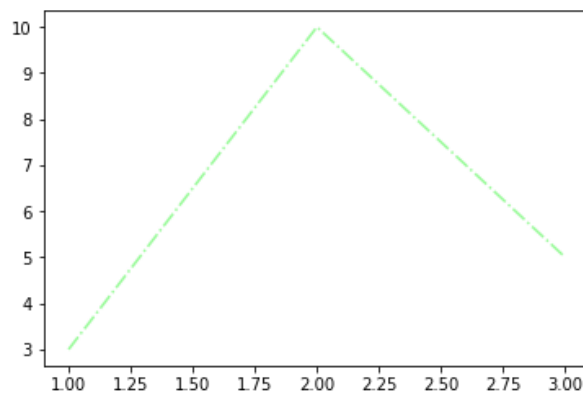
In [33]: `plt.plot([1,2,3], [3,10,5], '-.', c='0.0')`

Out[33]: [<matplotlib.lines.Line2D at 0x117c68160>]
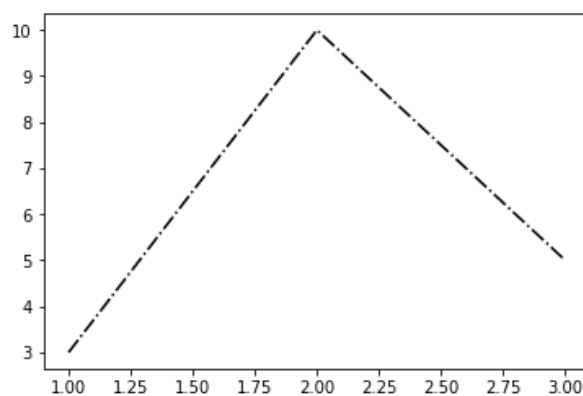
In [35]: `plt.plot([1,2,3], [3,10,5], '-.', c='0.8')`

Out[35]: `[<matplotlib.lines.Line2D at 0x117de9710>]`
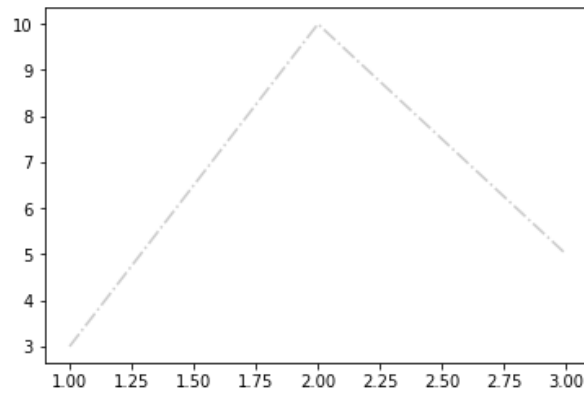
In [47]: `plt.plot([1,2,3], [3,10,5], '-.', c='#a1261b')`

Out[47]: `[<matplotlib.lines.Line2D at 0x1184e02b0>]`
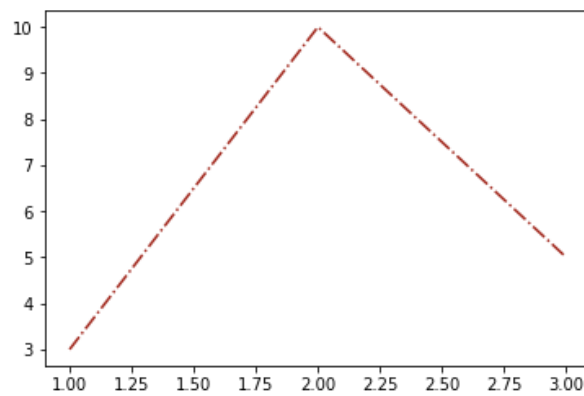
In [49]:
```
plt.plot([1,2,3], [3,10,5], '-.', c='#a1261b')
plt.xlim((1.5, 2.5))
plt.ylim((6,9))
```

Out[49]: `(6, 9)`
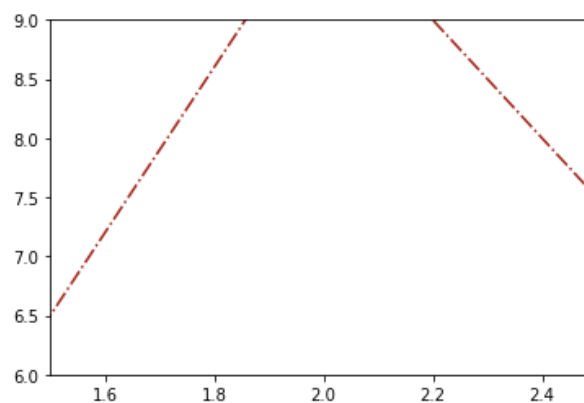
In [54]:
```python
plt.plot([1,2,3], [3,10,5], '-.', c='#a1261b')
plt.xlabel('Number of X')
plt.ylabel('Number of Y')
plt.title('The greatest plot eva')
```

Out[54]: Text(0.5,1,'The greatest plot eva')
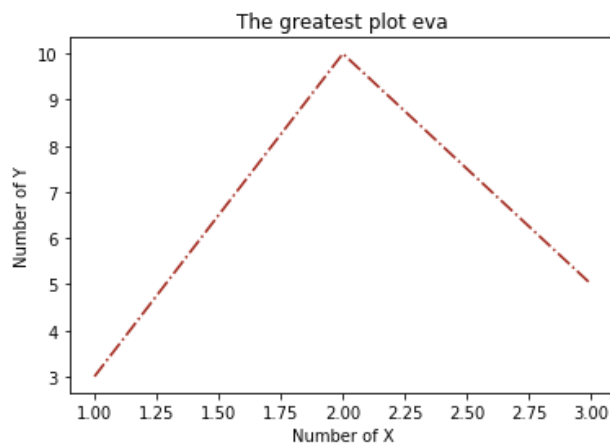
In [57]:
```python
Y = [4,5,6,5,4,4,3,2,1,2,3,4,5]
plt.plot(range(len(Y)), Y, '.')
```

Out[57]: [<matplotlib.lines.Line2D at 0x118c58c18>]

In [59]:
```python
Y = [4,5,6,5,4,4,3,2,1,2,3,4,5]
plt.plot(range(len(Y)), Y, '.')
plt.xticks([2,4,10])
```

Out[59]: ([<matplotlib.axis.XTick at 0x118d451d0>,
    <matplotlib.axis.XTick at 0x118d41ac8>,
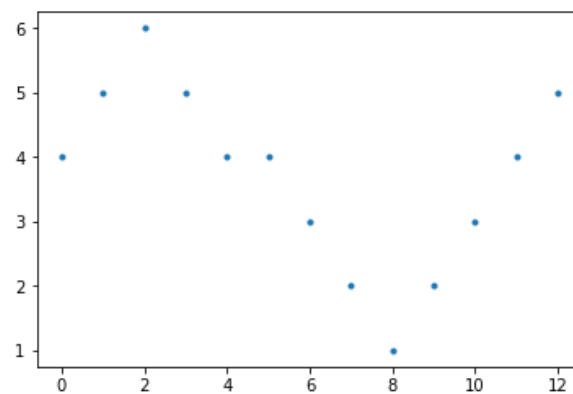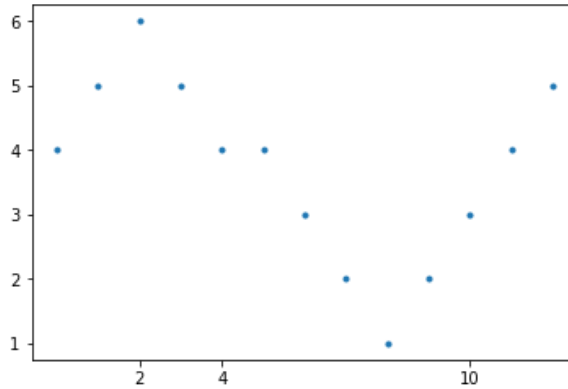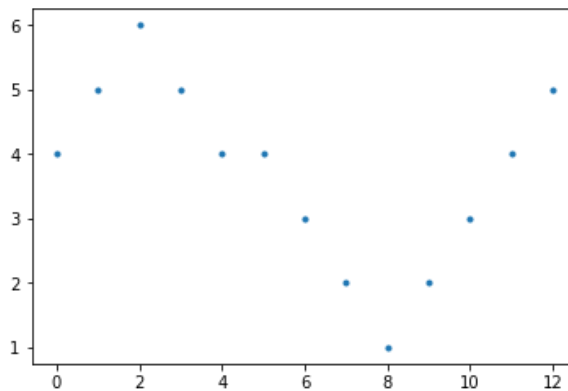   <matplotlib.axis.XTick at 0x118d41860>],
  <a list of 3 Text xticklabel objects>)

In [76]:
```python
Y = [4,5,6,5,4,4,3,2,1,2,3,4,5]
plt.plot(range(len(Y)), Y, '.')
#ticks = plt.xticks()
#t = [str(x) for x in ticks[0]]
#ticks[0][2] = "test"
#plt.set_xticklabels(t)
```

Out[76]: [<matplotlib.lines.Line2D at 0x1194e3f98>]

```
In [69]: ticks = plt.xticks()
         ticks
```

Out[69]: (array([0. , 0.2, 0.4, 0.6, 0.8, 1.]), <a list of 6 Text xticklabel objects>)
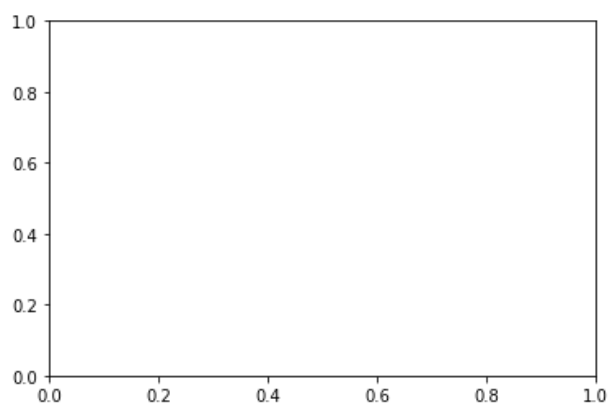
```
In [73]: t = [str(x) for x in ticks[0]]
```

```
In [21]: plt.plot([1,2], [3,10], '-.', c='yellow')
         plt.plot([2,3], [10,5], '-', c='steelblue')
```

Out[21]: [<matplotlib.lines.Line2D at 0x117360da0>]

```
In [22]: def f(x):
             return x**2
```

```
In [23]: import numpy as np
```

In [77]:
```python
X = np.arange(0,2,0.01)
plt.plot(X, [f(i) for i in X], color='pink')
```
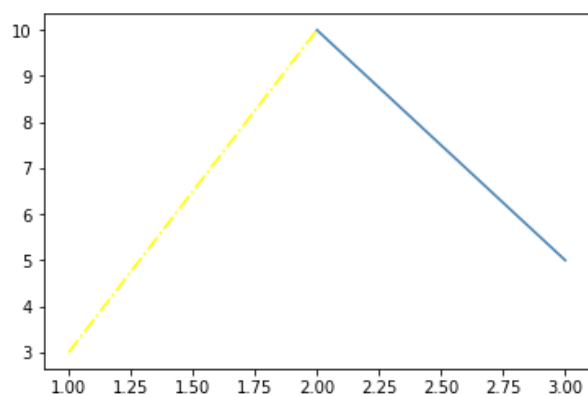
Out[77]: [<matplotlib.lines.Line2D at 0x1195465f8>]
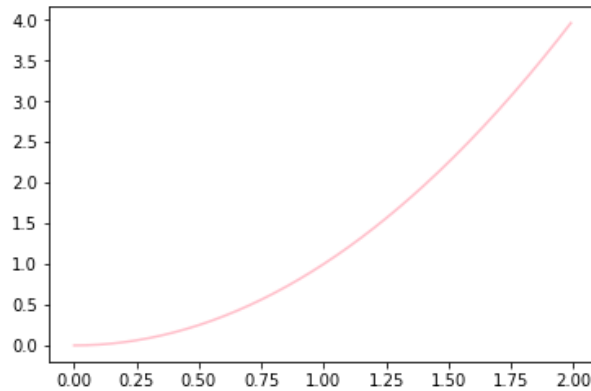
In [87]:
```python
X = np.arange(0,2,0.01)
plt.plot(X, [f(i) for i in X], color='pink')
plt.savefig('figure1.png')
plt.savefig('figure12.png', dpi=600)
plt.savefig('figure2.pdf')
plt.savefig('figure3.eps')
plt.savefig('figure4.tiff')
```
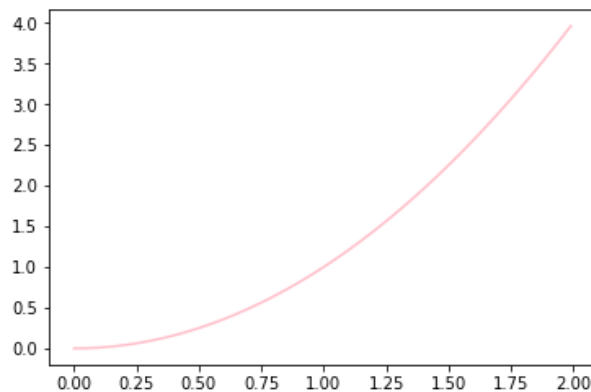

In [ ]:

In [92]:
```python
X = np.arange(0,2,0.01)
l, = plt.plot(X, [f(i) for i in X], color='pink')
m, = plt.plot(X, [f(i)/2 for i in X], color='black')
plt.legend([l,m], ['Number of trolls', 'Another legend'])
```

Out[92]: <matplotlib.legend.Legend at 0x118e1b1d0>

In [100]:
```python
X = np.arange(0,2,0.01)
l, = plt.plot(X, [f(i) for i in X], color='pink')
m, = plt.plot(X, [f(i)/2 for i in X], color='black')
plt.legend([l,m], ['Number of trolls', 'Another legend'], loc=2)
#plt.legend([m, l], ['Number of trolls', 'Another legend'], loc=2)
```
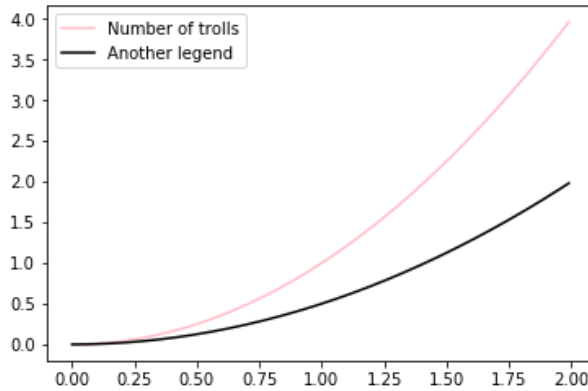
Out[100]: <matplotlib.legend.Legend at 0x11c2414e0>

In [102]:
```python
X = np.arange(0,2,0.01)
l, = plt.plot(X, [f(i) for i in X], color='pink')
m, = plt.plot(X, [f(i)/2 for i in X], color='black')
plt.grid(True)
plt.legend([l,m], ['Number of trolls', 'Another legend'], loc=2)
#plt.legend([m, l], ['Number of trolls', 'Another legend'], loc=2)
```
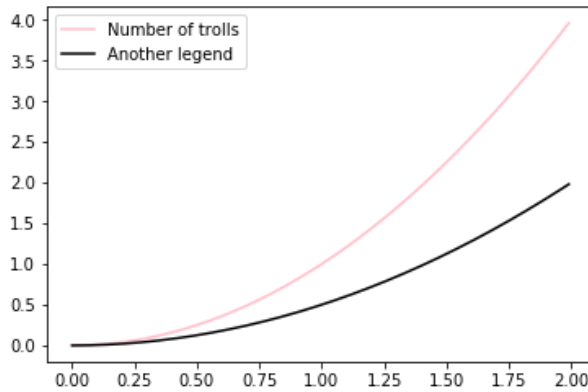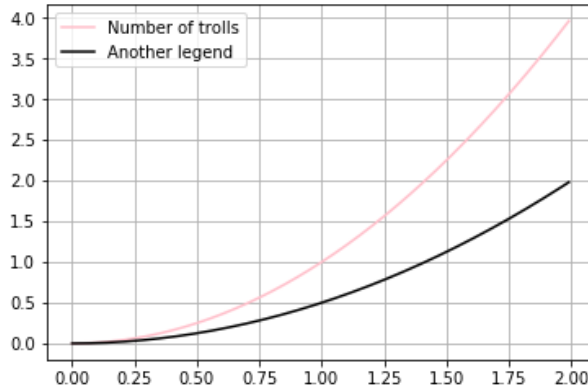
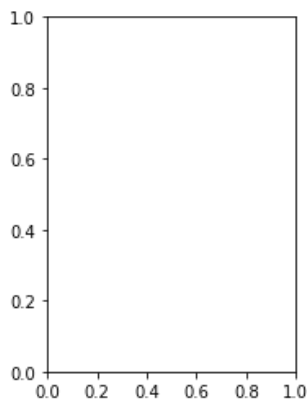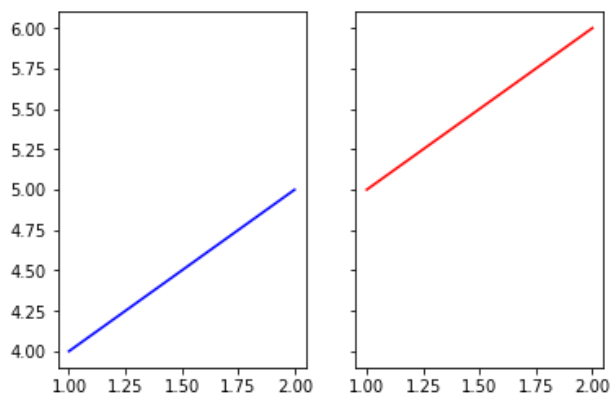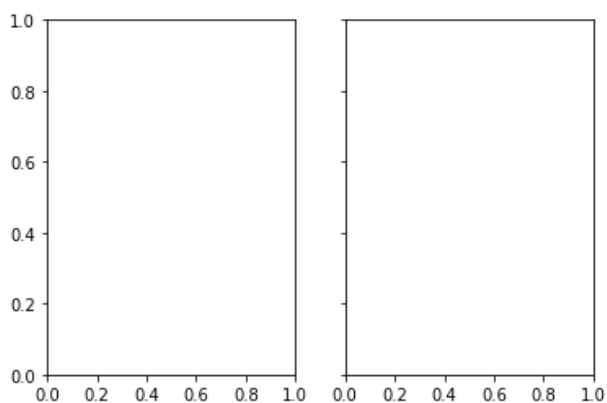Out[102]: `<matplotlib.legend.Legend at 0x118523d30>`

In [109]:

In [130]:
```python
fig, axs = plt.subplots(1,2, sharey='all')

axs[0].plot([1,2], [4,5], color='blue')

axs[1].plot([1,2], [5,6], color='red')
plt.show()
```

In [131]: `plt.subplots(1,2, sharey='all', sharex='all')`

Out[131]: (<Figure size 432x288 with 2 Axes>,
          array([<matplotlib.axes._subplots.AxesSubplot object at 0x11cdde3c8>,
                 <matplotlib.axes._subplots.AxesSubplot object at 0x11cd617f0>],
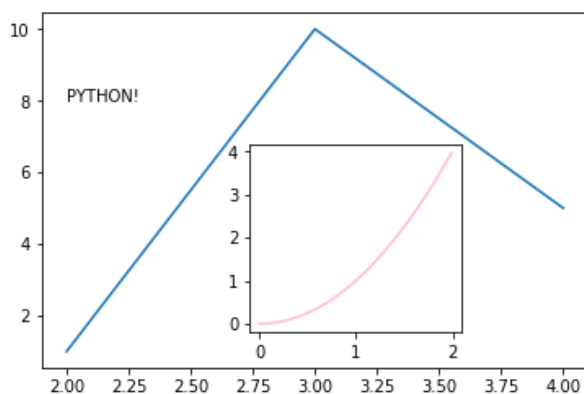   dtype=object))

In [3]:
```python
#import seaborn as sns
def f(x):
    return x**2

import matplotlib.pyplot as plt
import numpy as np

X = np.arange(0,2,0.01)
fig, axes = plt.subplots(1,1)

axes.plot([2,3,4], [1,10,5])
axes.text(2, 8, "PYTHON!")
ax2 = fig.add_axes([0.42, 0.2, 0.3, 0.4])
ax2.plot(X, [f(i) for i in X], color='pink')
```
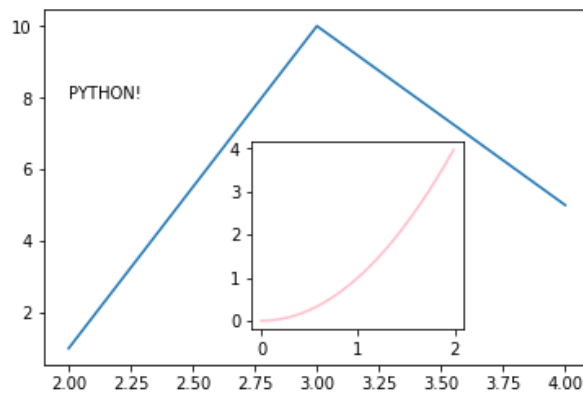
Out[3]: [<matplotlib.lines.Line2D at 0x119549c88>]

In [4]:
```python
def f(x):
    return x**2

#import matplotlib.pyplot as plt
#import numpy as np

import seaborn as sns


X = np.arange(0,2,0.01)
fig, axes = plt.subplots(1,1)

axes.plot([2,3,4], [1,10,5])
axes.text(2, 8, "PYTHON!")
ax2 = fig.add_axes([0.42, 0.2, 0.3, 0.4])
ax2.plot(X, [f(i) for i in X], color='pink')
```

Out[4]: [<matplotlib.lines.Line2D at 0x1a1ca92908>]

```
In [8]: import seaborn as sns
        sns.set(style="darkgrid")

        import pandas as pd


        data = {'total_bill': np.random.random(10), 'tip': np.random.random(10)}

        tips = pd.DataFrame(data)

        tips = sns.load_dataset("tips")
        g = sns.jointplot("total_bill", "tip", data=tips, kind="reg",
                          xlim=(0, 60), ylim=(0, 12), color="m", height=7)
```

/Users/alexandroskanterakis/anaconda3/lib/python3.7/site-packages/scipy/stats/
stats.py:1713: FutureWarning: Using a non-tuple sequence for multidimensional
indexing is deprecated; use `arr[tuple(seq)]` instead of `arr[seq]`. In the fu
ture this will be interpreted as an array index, `arr[np.array(seq)]`, which w
ill result either in an error or a different result.
  return np.add.reduce(sorted[indexer] * weights, axis=axis) / sumval
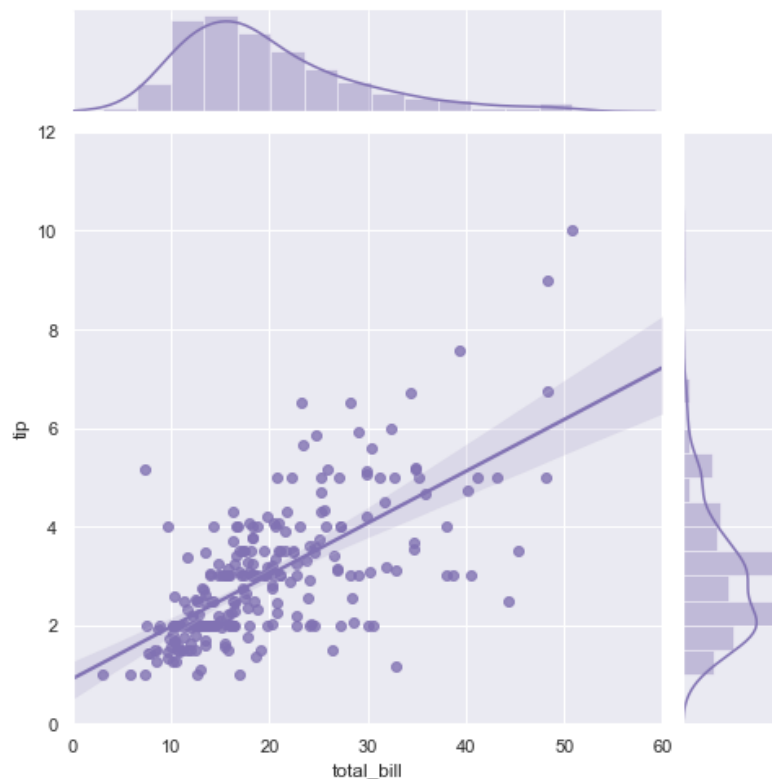

```
In [5]: np.random.random(10)
```

```
Out[5]: array([0.74743817, 0.35299621, 0.84989516, 0.30301635, 0.29934031,
               0.22365436, 0.67617599, 0.76161916, 0.41023415, 0.17636099])
```

```
In [9]: import re
```

```
In [15]: re.findall(r'[\d]([\D]+)[\d]', 'abcd123defg4kkk777')
```

```
Out[15]: ['defg']
```