## EOSC 211: Steps in Problem Solving

**Insert a check mark in the table below next to the question letter when you are done with that question.**

|  |  |
| --- | --- |
| A |  |
| B |  |
| C |  |
| D |  |

**GOAL: practice the steps in problem solving using earthquake data.**

1. **Write down the 3 steps in algorithm design mentioned in the text book OR write down some steps you think will be common to problem solving with MATLAB (you might have more than 3 steps):**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**We want to find the largest earthquake in the Pacific Northwest region in the past year. The data sheet gives all earthquakes in this area that have a magnitude of at least 4.0.**

**B. Fill in the following table**

|  |  |  |
| --- | --- | --- |
|  | **Describe in words** | **Give value** |
| **input** |  |  |
| **output** |  |  |

**C. Below, document the procedure you went through to get to your answer for the value of the output above.**

**HINT: you need to think about what your brain actually does when it finds the largest # in a list**

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1. **In the following code snippet circle and identify** 
   1. **Variable names**
   2. **Operators**
   3. **Reserved words**
   4. **Special characters**



**Earthquakes Canada Online Bulletin**

Date-Time|Latitude|Longitude|Depth/km|MagType|Magnitude|EventLocationName

2020-08-19T11:40:59|50.6077|-129.4759|10.0|ML|4.0| 140 KM W OF PORT HARDY, BC

2020-08-19T11:40:55|50.4094|-130.2877|10.0|Mw|4.3| 200 km W of Port Hardy, BC

2020-07-22T11:33:21|48.8371|-129.3728|10.0|Mw|5.2| 221 km SW of Port Alice, BC

2020-05-23T02:14:52|50.3600|-129.2800| 8.0|Mw|4.9| 129 km W of Port Alice, BC

2020-05-23T02:14:48|50.1783|-129.8157|10.0|Mw|5.1| 169 km W of Port Alice, BC

2020-05-10T04:45:59|49.3278|-127.8000|10.0|Mw|4.8| 120 km S of Port Alice, BC

2020-03-29T19:32:02|50.4999|-130.2003|10.0|Mw|4.3| 192 km W of Port Hardy, BC

2020-03-29T18:28:54|50.4114|-130.2842|10.0|Mw|4.0| 200 km W of Port Hardy, BC

2020-03-05T23:22:28|50.9881|-130.2942|10.0|Mw|4.0| 198 km W of Port Hardy, BC

2020-03-02T13:43:21|50.4455|-130.2483|10.0|Mw|4.4| 196 km W of Port Hardy, BC

2020-01-24T21:35:30|48.5739|-125.1857|38.5|Mw|4.5| 29 km S of Bamfield, BC

2020-01-08T20:20:38|50.6677|-130.4762|10.0|Mw|4.6| 09 km W of Port Hardy, BC

2020-01-06T12:21:43|47.7203|-129.3662|10.0|Mw|4.1| 300 km SW of Tofino, BC

2020-01-06T12:12:05|47.6905|-129.0957|10.0|Mw|4.0| 285 km SW of Tofino, BC

2019-12-29T08:32:29|50.7334|-130.4852|10.0|Mw|4.1| 210 km W of Port Hardy, BC

2019-12-25T20:38:50|50.7207|-130.5307|10.0|Mw|4.8| 213 km W of Port Hardy, BC

2019-12-25T07:31:07|50.2863|-130.2239|10.0|Mw|4.0| 197 km W of Port Alice, BC

2019-12-25T03:35:59|50.4851|-130.0955|10.0|Mw|6.2| 185 km W of Port Hardy, BC

2019-12-23T23:38:25|50.3906|-130.2040|10.0|Mw|4.9| 194 km W of Port Hardy, BC

2019-12-23T23:14:41|50.2895|-129.7727|10.0|Mw|4.0| 165 km W of Port Alice, BC

2019-12-23T22:50:13|50.4613|-129.5008|10.0|Mw|4.1| 144 km W of Port Hardy, BC

2019-12-23T22:20:02|50.3363|-130.0474|10.0|Mw|4.4| 184 km W of Port Alice, BC

2019-12-23T21:05:26|50.2388|-129.8421|10.0|Mw|4.9| 171 km W of Port Alice, BC

2019-12-23T20:56:21|50.2903|-130.0174|10.0|Mw|6.1| 182 km W of Port Alice, BC

2019-12-23T20:03:20|50.5622|-129.9012|10.0|Mw|4.2| 170 km W of Port Hardy, BC

2019-12-23T20:00:25|50.6015|-130.0958|10.0|Mw|4.7| 183 km W of Port Hardy, BC

2019-12-23T19:57:39|50.5347|-130.3156|10.0|Mw|4.9| 200 km W of Port Hardy, BC

2019-12-23T19:49:41|50.4871|-130.0940|10.0|Mw|6.0| 185 km W of Port Hardy, BC

2019-12-23T19:26:45|50.3751|-130.0185|10.0|Mw|4.0| 182 km W of Port Alice, BC

2019-12-23T19:13:24|50.4146|-130.0350|10.0|Mw|5.6| 182 km W of Port Hardy, BC

2019-12-23T16:44:10|50.3299|-130.0984|10.0|Mw|5.1| 188 km W of Port Alice, BC

http://www.earthquakescanada.nrcan.gc.ca/