## EOSC 211: Steps in Problem Solving

**Name 1:**

**Name 2:**

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. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**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**

mag1 =4.9;

mag2 =5.3;

if (mag1 > mag2)

max\_mag= mag1;

else

max\_mag = mag2;

end

**Earthquakes Canada Online Bulletin - 20170830.0000 20180831.2242**

Date Time(UT) Lat Lon Depth Mag Region and Comment

2018/08/21 13:10:05 50.656 -130.475 10.0g 4.9Mw 215 km W of Pt. Hardy

2018/08/01 04:13:48 50.252 -130.228 10.0g 4.5Mw 205 km W of Pt. Hardy

2018/07/02 04:08:13 51.242 -130.827 10.0g 4.0Mw 212 km WSW of Bella Bella

2018/07/02 04:08:13 51.278 -130.762 10.0g 4.0Mw 206 km WSW of Bella Bella

2018/07/02 04:08:13 51.278 -130.762 10.0g 4.1Mw 206 km WSW of Bella Bella

2018/05/10 06:36:15 48.663 -129.387 10.0g 4.0Mw 259 km W of Tofino

2018/04/24 17:41:16 50.503 -130.153 10.0g 4.3Mw 194 km W of Pt. Hardy

2018/04/03 04:21:13 49.016 -129.374 10.0g 4.4Mw 234 km SW of Pt. Hardy

2018/03/16 02:56:23 48.984 -129.655 10.0g 4.6Mw 249 km SW of Pt. Hardy

2018/03/16 02:56:23 48.984 -129.655 10.0g 4.0Mw 249 km SW of Pt. Hardy

2018/03/06 09:38:24 49.521 -127.586 10.0g 4.1Mw 108 km W of Gold R.

2018/03/01 18:35:34 50.555 -130.386 10.0g 4.6Mw 210 km W of Pt. Hardy

2018/01/28 08:52:01 51.113 -130.495 10.0g 4.1Mw 200 km WSW of Bella Bella

2018/01/23 10:39:19 48.815 -129.336 10.0g 4.4Mw 251 km SW of Pt. Hardy

2018/01/15 05:38:43 50.516 -130.121 10.0g 4.0Mw 192 km W of Pt. Hardy

2018/01/14 21:41:24 50.433 -130.282 10.0g 4.3Mw 204 km W of Pt. Hardy

2018/01/14 20:36:08 50.472 -130.265 10.0g 4.0Mw 202 km W of Pt. Hardy

2018/01/14 20:25:35 50.444 -130.257 10.0g 4.5Mw 202 km W of Pt. Hardy

2018/01/14 19:10:52 50.500 -130.270 10.0g 4.7Mw 202 km W of Pt. Hardy

2018/01/14 18:54:01 50.504 -130.288 10.0g 4.8Mw 204 km W of Pt. Hardy

2018/01/10 18:40:07 50.732 -130.534 10.0g 4.5Mw 219 km W of Pt. Hardy

2018/01/10 18:40:07 50.732 -130.534 10.0g 4.0Mw 219 km W of Pt. Hardy

2017/12/17 04:11:08 50.049 -130.073 10.0g 4.7Mw 201 km WSW of Pt. Hardy

2017/12/17 04:11:08 50.049 -130.073 10.0g 4.0Mw 201 km WSW of Pt. Hardy

2017/12/05 22:14:14 51.368 -130.758 10.0g 4.4Mw 201 km WSW of Bella Bella

2017/12/04 03:51:41 50.424 -130.314 10.0g 4.5Mw 207 km W of Pt. Hardy

2017/11/21 09:47:05 49.157 -130.015 10.0g 4.9Mw 253 km WSW of Pt. Hardy

2017/11/21 09:47:05 49.157 -130.015 10.0g 4.3Mw 253 km WSW of Pt. Hardy

2017/11/13 18:37:28 49.206 -129.898 10.0g 4.5Mw 243 km WSW of Pt. Hardy

2017/11/13 18:37:28 49.206 -129.898 10.0g 4.0Mw 243 km WSW of Pt. Hardy

2017/10/11 09:26:05 48.163 -128.280 10.0g 4.5Mw 205 km WSW of Tofino

2017/09/28 07:48:02 50.643 -130.519 10.0g 4.4Mw 218 km W of Pt. Hardy

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