Unit 1 Lesson 13 – Comparing Numbers in Scientific Notation

For each problem below, place the proper sign (< , > , = ) in the space provided.

1.) 4.5 x 10-5 5.61 x 10-6

2.) 7.1 x 104 7 x 105

3.) 5,100  5.1 x 103

4.) 1.01 x 10-4 3.3 x 10-3

5.) 9.42 x 10-5 8.6 x 10-7

6.) 7.4 x 10-3 0.00074

7.) 4.3 x 10-4  4.32 x 10-4

8.) 7.8 x 10-7  7.8 x 10-8

9.) Put these numbers in order greatest to least:

1.9 x 105 1.92 x 103 1.39 x 106

10.) Put these numbers in order least to greatest:

4.09 x 10-2 5.928 x 10-3 6.1 x 10-3

11.) Put these numbers in order from least to greatest.

8.9 x 104 8.91 x 103 8.19 x 104 8 x 103

12.) Put these numbers in order from greatest to least.

1.07 x 10-2 1.7 x 10-5 1.07 x 10-3 1.7 x 10-2

13.) The Fornax Dwarf galaxy is 4.6 x 105 light-years away from Earth, while Andromeda I is 2.430 x 106 light-years away from Earth. Which one is closer to Earth?

14.) The average lifetime of the tau lepton is 2.906 x 10-13 seconds, and the average lifetime of the neutral pion is 8.4 x 10-17 seconds. Explain which subatomic particle has a longer average lifetime.

15.) The mass of a neutron is approximately 1.674927 x 10-27 kg and the mass of a proton is approximately 1.672622 x 10-27. Which one is heavier?

16.) The average lifetime of the Z boson is approximately 3 x 10-25 seconds, and the average lifetime of a neutral rho meson is approximately 4.5 x 10-24 seconds. Which one has a shorter average lifetime?