Unit 1 Lesson 10 – Adding & Subtracting in Scientific Notation

For questions 1-6, the following table represents the debt and population for 6 states in 2012.

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| **State** | **Debt (in dollars)** | **Population (2012)** |
| California | 4.07 x 1011 | 3.8 x 107 |
| New York | 3.37 x 1011 | 1.9 x 107 |
| Texas | 2.76 x 1011 | 2.6 x 107 |
| North Dakota | 3.47 x 109 | 6.9 x 104 |
| Vermont | 4.25 x 109 | 6.26 x 104 |
| Wyoming | 2.08 x 109 | 5.76 x 104 |

1.) How much larger is the population of California than the population of Texas?

2.) What is the sum of the debt of Vermont and Wyoming?

3.) What is the combined population of North Dakota and Vermont?

4.) How much larger is the debt of North Dakota than the debt of Vermont?

5.) What is the combined population of California, New York and Texas?

6.) How much larger is the population of North Dakota than the population of Wyoming?

For questions 7 – 12, the masses of the so-called inner planets of the Solar System are:

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| **Planet** | **Mass** |
| Mercury | 3.3022 x 1023 kg |
| Venus | 4.8685 x 1024 kg |
| Earth | 5.9722 x 1024 kg |
| Mars | 6.4185 x 1023 kg |

7.) What is the combined mass of Venus and Earth?

8.) How much larger is the mass of Earth than the mass of Venus?

9.) What is the combined mass of Mars and Mercury expressed in scientific notation?  
  
  
  
  
  
10.) What is the difference in the mass of the Mars and Mercury expressed in scientific notation?  
  
  
  
  
  
11.) How much larger is the mass of Earth than the mass of Mercury?  
  
  
  
  
  
12.) What is the sum of the mass of Venus and Mars?