Problem Set – Significant Figures – 1

/20*

Name: _____ Period _____

Part I: Give the number of significant figures in each number shown below.

1.) 625 _____ 2.) 1.004 _____ 3.) 0.0041 _____ 4.) 20 _____

5.) 15.0 _____ 6.) $20\overline{0}0$ _____ 7.) 500. _____ 8.) 0.600 _____

Part II: Round the following numbers to two significant digits.

9.) 406 _____ 10.) 4.23 _____

11.) 0.00605 _____ 12.) 2.001 _____

13.) 1.15 _____ 14.) $10\overline{0}0$ _____

Part III: Round the following numbers to three significant digits.

15.) 2500. _____ 16.) 0.09999 _____

Part IV: Perform the following operations rounding off your answer to the correct number of significant figures.

17.) 0.096 + 0.298 + 30 = _____

18.) 8.70 / 5.017 = _____

19.) 120 * 0.961 = _____

20.) 793 - 25.6 = _____

21.) 89 * (0.0888 + 4.30) = _____

Part V: Convert the following numbers to scientific notation.

22.) $51\overline{0}0$ _____ 23.) 0.00828 _____

24.) 64000 _____ 25.) 0.00720 _____

Part VI: Convert the following numbers from scientific notation to standard notation.

26.) 6.260×10^{2} _____ 27.) 4.0×10^{3} _____

28.) 3.32×10^{-3} _____ 29.) 6.400×10^{-2} _____

Part VII: Add the following numbers and answer using correct significant digits. Hint: You may want to convert them all to standard notation to see which place value to report your answer to.

30.) $4.740 \times 10^{3} + 1.86 \times 10^{-2} + 2.089 \times 10^{4} =$ _____

31.) $3.24 \times 10^{-2} + 4.16 \times 10^{-3} + 9.00 \times 10^{-2} =$ _____

Part VIII: Subtract the following numbers and answer using correct significant digits. Hint: You may want to convert them all to standard notation to see which place value to report your answer to.

32.) $6.670 \times 10^{5} - 3.55 \times 10^{4} =$ _____

33.) $1.87 \times 10^{-2} - 3.86 \times 10^{-3} =$ _____

Part IX: Multiply the following numbers and answer using correct significant digits.

34.) $8.93 \times 10^{-12} \cdot 5.4 \times 10^{-75} =$ _____

35.) $6.98 \times 10^{-11} \cdot 7 \times 10^{81} \cdot 8.3 \times 10^{16} =$ _____

Part X: Divide the following numbers and answer using correct significant digits.

36.) $9.4 \times 10^{3} / 7.083 \times 10^{4} =$ _____

37.) $3.03 \times 10^{26} / 9 \times 10^{70} =$ _____

Part XI: Convert and calculate the following metric measurements.

38.) 87.1 ks + 0.0826 Ms + 1910 hs = _____ ks

39.) The cover of a textbook measures 21.4 cm by 27.83 cm. How many square centimeters is the book's cover?

40.) A classroom measures 10.9 m long by 8.27 m wide by 3.084 m tall. What is the volume of the classroom?

* The grade for this assignment can be reduced to the percentage that you earn on the original unit 1 test.