Name

Date

Period

**Physics buffet style…a little bit of everything**

Section A: Round to two after the decimal

1) \_\_\_\_\_\_\_\_\_ 5.436 4) \_\_\_\_\_\_\_\_ 0.032

2) \_\_\_\_\_\_\_\_\_ 2986.123 5) \_\_\_\_\_\_\_\_ 0.305

3) \_\_\_\_\_\_\_\_\_ 1098.675 6) \_\_\_\_\_\_\_\_ 313.514

Section B: Exponential Notation- Pretend you read this on a calculator. Write out the full numerical answer without significant figures.

7) \_\_\_\_\_\_\_\_\_ 3 -2 10) \_\_\_\_\_\_\_\_\_\_ 4 3

8) \_\_\_\_\_\_\_\_\_8 4 11) \_\_\_\_\_\_\_\_\_\_ 167 -1

9) \_\_\_\_\_\_\_\_\_ 0.32 -2 12) \_\_\_\_\_\_\_\_\_\_ 0.043 3

Section C: Scientific Notation- Write each of the following numbers in scientific notation (opposite as to what you did in Section B)

13) \_\_\_\_\_\_\_\_\_\_\_\_\_ 239,000,000,000 16) \_\_\_\_\_\_\_\_\_\_ 0.0000158

14) \_\_\_\_\_\_\_\_\_\_\_\_\_ 738 17) \_\_\_\_\_\_\_\_\_\_ 0.020

15) \_\_\_\_\_\_\_\_\_\_\_\_\_ 4200 18) \_\_\_\_\_\_\_\_\_\_ 53,000,000

Section D: Identify each item as magnitude, unit, or variable

19) \_\_\_\_\_\_\_\_\_\_\_\_\_ time 22) \_\_\_\_\_\_\_\_\_\_\_ 32.7

20) \_\_\_\_\_\_\_\_\_\_\_\_\_ mi/hr 23) \_\_\_\_\_\_\_\_\_\_\_ m/s

21) \_\_\_\_\_\_\_\_\_\_\_\_\_ 0.19 24) \_\_\_\_\_\_\_\_\_\_\_ distance

Section E: SI conversions and Prefixes

25) \_\_\_\_\_\_\_\_\_\_\_\_\_ Convert 7.56 kg to g 28) \_\_\_\_\_\_\_\_\_\_\_\_ 1000

26) \_\_\_\_\_\_\_\_\_\_\_\_\_ Convert 0.000830 m to cm 29) \_\_\_\_\_\_\_\_\_\_\_\_ 0.1

27) \_\_\_\_\_\_\_\_\_\_\_\_\_ Convert 11.3 mL to dekaL 30) \_\_\_\_\_\_\_\_\_\_\_\_ 0.001

31) \*\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Add 9.78 m to 345 cm. Express your answer in cm.

32) \*\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Add 0.735 m to 4.1 cm. Express your answer in cm.

Section F: Identify the following as distance, direction, or vector

33) \_\_\_\_\_\_\_\_\_\_\_\_\_ 5 m 36) \_\_\_\_\_\_\_\_\_\_\_\_ 5.23 m/s East

34) \_\_\_\_\_\_\_\_\_\_\_\_\_ North 37) \_\_\_\_\_\_\_\_\_\_\_\_ down

35) \_\_\_\_\_\_\_\_\_\_\_\_\_ 55 mi/hr West 38) \_\_\_\_\_\_\_\_\_\_\_\_ 0.15 m

Section G: Dimensional Analysis

39) \_\_\_\_\_\_\_\_\_\_\_\_\_ Convert 33 m to ft (1 m= 3.28 ft)

40) \_\_\_\_\_\_\_\_\_\_\_\_\_ Mary wanted to know how many liters of lemonade she was going to make if she used 14.9 cups of water. (Ignore the displacement of sugar.) (1 cup= ~0.237 L)

41) \_\_\_\_\_\_\_\_\_\_\_\_\_ Jack got pulled over in a foreign country for speeding. He was going 45 mi/hr. The speed limit was 60 km/hr- was he speeding and by how much? (1 mile= 1.61 km) (The per hour is the same for both speeds- so you can ignore it.)

42) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ You go to a doctor in the United States and they tell you that you are 5 ft 9 inches tall. If you were to go to a doctor in another country and they use the metric system- how tall would you be in meters? (1 inch= ~0.0254 m) (First make 5 ft into inches.)

Section H: Scientific Method

43) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ You are testing three new plant fertilizers on four of the exact same plants. What is the plant called that you DO NOT change?

44) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ What part of the scientific method is YOUR educated guess about what you “think” will occur to your experiment?

Section I: Misc. Vocabulary

45) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mechanical engineers have to draw on paper what they are going to make (a car, a toy, a cell phone). When the engineers make a 2-D or 3-D image of this- via clay, Popsicle sticks, or even Legos what is this called?

46) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Katniss continues to hit her target using a bow and arrow. What is this vocabulary word? (Sorry Hunger Game haters!)

47) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Peeta does not hit his targets, but he continues to hit the same spot over and over. What is this vocabulary word?