**Chemistry Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Unit 1 Review**

 **Period\_\_\_\_\_\_**

**Convert to scientific notation or standard notation:**

1) 28,000,000 10) 2.101 x 10¯6

2) .000000463 11) 3.051 x 102

3) 60840000000000 12) 3.22 x 105

4) 0.000201 13) 8.27 x 109

5) 3,010,000 14) 3.86 x 10¯2

6) 0.000000000000057 15) 2.511 x 104

7) 20,100 16) 4.82 x 10¯12

8) 0.00025 17) 3.21 x 1012

9) 65,000,000,000,000,000

**Identify the number of significant figures:**

18) 3.0800 22) 0.003005

19) 0.00418 23) 3.200 x 109

20) 7.09 x 10¯5 24) 250

21) 91,600 25) 780,000,000

**Factor Label:**

26) A mustang is traveling at 150 dkm/min. A grizzly is moving at 210 mm/sec. and a bobcat is cruising at 8 km/hour. How fast is each going in Meters/second?

27) If you are travelling 55 mph in an automobile, how fast are you going in feet per second?

**Calculations:** Round your answers to the correct number of significant digits.

28) (2.68 x 10¯5) x (4.40 x 10¯8)

29) (2.95 x 107) ÷ (6.28 x 1015)

30) (8.41 x 106) x (5.02 x 1012)

 (9.21 x 10¯4) ÷ (7.60 x 105)

 **Make the following conversions**.

31) 7 kg = \_\_\_\_\_\_\_\_\_\_\_\_\_ cg. 4) 32) 10 cm = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ mm

33) 13 ml = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ cm3 34) 45 g = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mg

35) 2.77 cm = \_\_\_\_\_\_\_\_\_\_\_\_\_ m 36) 55ml = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ dkl

37. Identify each of the following as either a physical change or a chemical change.

a. A piece of paper is torn in half. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. Orange juice turns sour. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. Water is frozen. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d. A piece of wood is burned. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

38. Identify each of the following as either a pure substance or a mixture. If it’s a mixture, write whether it’s homogeneous or heterogeneous.

a. salt-water solution \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. sandy ocean water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. blood \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d. C6H12O6, sugar \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e. burrito \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

f. O2, oxygen \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

39. Answer the following questions about the states of matter by filling in the blanks with the following words: **fixed or variable** (the words can be used more than once).

1. A solid has a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ shape and a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ volume.
2. A gas has a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ shape and a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ volume.
3. A liquid has a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ shape and a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ volume.