Extra Practice – Conversions & Dimensional Analysis Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Per \_\_\_\_\_\_\_

Complete the following conversions.

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| 1. 74 cm = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ m | 2. 0.0832 km = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dm |
| 3. 5043 mL = \_\_\_\_\_\_\_\_\_\_\_\_\_ kL | 4. 0.00527 L = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ kL |
| 5. 0.000952 g = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ μg | 6. 41.0 mL = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ daL |
| 7. 0.66 g = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mg | 8. 8340000000cg = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ g |
| 9. 5000 hm = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ m | 10. 1 second = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ nanosecond |
| 11. 55.5 mL = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_cm3 | 12. 0.0000000000071 kg = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ng |
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Use **dimensional analysis** to complete the following problems.

13. How many hours in 1 year?

14. How many inches in 1 mile?

15. How many centiliters in 3.6 liters?

16. How many nickels could you trade for 250 yen? (150 yen = $1)

17. The booster club sold 600 tickets to a chili supper. The chili recipe (that would feed 10 people) requires

two teaspoons of chili powder. How many teaspoons of chili powder will you need altogether?

18. How many teaspoons of flour are in 4.5 cups? (3 tsp = 1 TBS 16 TBS = 1 cup)

20. How many inches long is a football field, including end zones?

(That would be 120 yards, for you non-football fans!)

19. What is the mass (in grams) of 83 mL of aluminum?

It is helpful to know that the density of aluminum is 2.7 g/mL. Hmm.

21. Chloroform is a liquid once used for anesthetic. What is the volume (in mL) of 0.0059 kg of chloroform?

The density of chloroform is 1.49 g/mL.

22. How many m3 is 4.6 cm3?

23. How many in3 in 0.038 yd3?