Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per. \_\_\_\_\_\_\_\_

2018 Q1Q2 Metric



1. What is the factor value for any base unit missing from this table?

2. Describe how you would move the decimal when converting m to cm?

3. Describe how you would move the decimal when converting μm to mm?

4. Describe how you would move the decimal when converting J to kJ?

5. Describe how you would move the decimal when converting pg to g?

**For questions 6 – 8**: Complete the metric conversion by unit analysis.

\*\* You can use the example below to help you show the proper setup and solve.

REMEMBER to Keep sig figs the same!

 **Example**: 2.35 km = \_\_\_\_\_\_\_\_\_\_\_\_ m the table tells us *1 km = 1000 m*

 2.35 km x 1000 m = 2350 m (**km cancels out** and notice decimal

 1 km moved 3 places to the right)

6. .550 m = \_\_\_\_\_\_\_\_\_\_\_\_ cm

7. .00350 kJ = \_\_\_\_\_\_\_\_\_\_\_\_ J

8. How many μL are in 250 mL?

9. Which of the following is the *shortest* length?

 1. 2.710 x 103 m 3. 27100000 μm

 2. 27.10 km 4. 27100 cm

10. 101300 Pa = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ kPa

11. 350 J = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ kJ

12. 750 mL = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dL

13. 500. g = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ kg

14. .009500 g = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ μg

15. .00025 mmol = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ μmol

16. 92000 ng = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ pg

17. **2.09 x 10-3**m = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mm

18. **6.25 x 107** μL = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ L

19. .000325 J = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_μJ

20. 3.270 x 1012 pm = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ km

\*\*HONORS OPTION\*\*

21. If 1 mL = 1 cm3 = 1 cc then 200000 cc = \_\_\_\_\_\_\_\_\_\_\_\_\_μL

22. If 1 pound = 2.2 kg then how many **mg** is 10. pounds equal to?