## Measurement & Math Skills Test Form C

Do NOT write on this page! Write answers on answer sheet. You can use your notes and a calculator to help you on this test.

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1. Mass is defined as
    a. The space something takes up.
    b. Amount of matter in something.
    c. How much stuff is packed into a certain amount of space.
    d. Mass per unit volume
    e. C and d
    f. All of the above

2. Density is defined as
    a. The space something takes up.
    b. Amount of matter in something.
    c. How much stuff is packed into a certain amount of space.
    d. Mass per unit volume
    e. C and d
    f. All of the above

3. Zeros are significant digits when they
    a. Are at the end of a number AND after the decimal
    b. Are between two other significant digits
    c. Are before the decimal point.
    d. Zeros are never significant.
    e. Are at the end of a number **without** a decimal.
    f. Both a and b
    g. Both c and e

4. A unit for measuring mass is
    a. Gram b. millileter c. centimeter d. gram/mL

5. Volume is measured with
    a. A graduated cylinder
    b. A scale
    c. A ruler
    d. It can't be measured, you have to calculate it.

6. The **meniscus** is
    a. a tool for measuring mass
    b. a tool for measuring volume
    c. a tool for measuring density
    d. a drop of water
    e. the curve at the top of the water

7. When measuring the volume of water, you should measure at the _____ of the curve at the top of the water.
    a. Top b. middle c. bottom d. side e. it doesn't matter

8. Each different substance in the universe has its own unique
   a. Mass b. Volume c. sig dig d. Density e. scientific notation

9. In the metric system, the symbol **k** stands for
   a. milli b. centi c. deci d. Deka e. Kilo f. hecto

10. In the metric system, the symbol **m** stands for
   a. milli b. centi c. deci d. Deka e. Kilo f. hecto

11. In the metric system, the value of **d** equals
   a. 1000 b. 100 c. 10 d. 1 e. 0.1 f. 0.01 g. 0.001

12. In the metric system, the value of **h** equals
   a. 1000 b. 100 c. 10 d. 1 e. 0.1 f. 0.01 g. 0.001

13. How many significant digits are in 0.0013 ?
   a. 5 b. 4 c. 3 d. 2 e. 1 f. 0

14. How many significant digits are in 23000 ?
   a. 5 b. 4 c. 3 d. 2 e. 1 f. 0

15. How many significant digits are in 102.10 ?
   a. 5 b. 4 c. 3 d. 2 e. 1 f. 0

16. Write 0.0025 in scientific notation.

17. Write the number of atoms in a mole in scientific notation. **680 000 000 000 000 000 000 000.**

Give the value (take OUT of scientific notation or expand)

**18. $6.5 \times 10^{-7}$ m (the wavelength of red light)**

19. $5.9 \times 10^{9}$ km (the average distance of Pluto from the sun)

Perform the calculation and round of your answer to the appropriate number of significant digits.

20. 210.0 x 2.00

21. 20.0 – 14.5

Convert the following

22. 100 g = _____ mg

23. 100 g = _____ kg

24. 1.5 x $\mathbf{10^{-3}}$ m = _____ mm

25. 1.5 x $\mathbf{10^{+3}}$ m = _____ km

Name _____ date _____ period _____

**Answer Sheet Measurement & Math Skills Test Form C**

**Multiple Choice**

| | | |
|---|---|---|
| 1. **a b c d e f g** | 6. **a b c d e f g** | 11. **a b c d e f g** |
| 2. **a b c d e f g** | 7. **a b c d e f g** | 12. **a b c d e f g** |
| 3. **a b c d e f g** | 8. **a b c d e f g** | 13. **a b c d e f g** |
| 4. **a b c d e f g** | 9. **a b c d e f g** | 14. **a b c d e f g** |
| 5. **a b c d e f g** | 10. **a b c d e f g** | 15. **a b c d e f g** |

Write in scientific notation.

16. _____ = 0.0025

17. _____ = 680 000 000 000 000 000 000 000. (the of atoms in a mole)

Give the value (take OUT of scientific notation or expand)

18. _____ = $6.5 \times 10^{-7}$ m (the wavelength of red light)

19. _____ = $5.9 \times 10^{9}$ km (the average distance of Pluto from the sun)

Show your work on 20 - 25

Perform the calculation and **round of your answer to the appropriate number of significant digits.**

20. _____ = 210.0 x 2.00

21. _____ = 20.0 – 14.5

Convert the following

22. 100 g = _____ mg

23. 100 g = _____ kg

24. 1.5 x $\mathbf{10^{-3}}$ m = _____ mm

25. 1.5 x $\mathbf{10^{+3}}$ m = _____ km