Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Hour\_\_\_\_\_\_\_\_\_\_\_\_

**Section 2.2 Study Guide: Units of Measurement**

**Completion**

*Complete each statement.*

1. Scientists world-wide have agreed on a single measurement system called Le Système International d’Unitès, abbreviated \_\_\_\_\_\_\_\_\_\_\_\_.

2. Kilogram, second, and Kelvin are all examples of units.

3. The SI unit for length is .

4. The SI unit for time is .

5. The symbol mm represents .

6. The quantity of matter per unit volume is .

7. The unit m measures .

8. The standard base unit for is kilograms.

9. A change in the force of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_on an object will affect its weight.

10. The relationship between mass, volume, and density is: D*=\_\_\_\_\_\_\_\_\_\_\_.*

11. The conversion factor  would be used to change milliliters to .

**In each of the following measurements, name the quantity being measured.**

**Example:** *temperature* **300 K**

12. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 22 s

13. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3.5 mg

14. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1.59 g/mL

15. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 16 J

16. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 34.5 km

17. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 0.75 mL

18. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3.66 m

Convert the following measurements. Write your answer on the line to the left. **Show your work including conversion factor to the right of the problem.**

19. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ kg  43.2 g

20. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mL  5.4 L

21. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ g/mL  4.5 g/L

**Matching**

|  |  |  |  |
| --- | --- | --- | --- |
| a. | millimeter | f. | kilogram |
| b. | kilometer | g. | milliliter |
| c. | centimeter | h. | gram |
| d. | meter | i. | cubic centimeter |
| e. | decimeter | j. | liter |

\_\_\_\_ 22. km

\_\_\_\_ 23. L

\_\_\_\_ 24. mm

\_\_\_\_ 25. m

\_\_\_\_ 26. kg

\_\_\_\_ 27. mL

\_\_\_\_ 28. cm

\_\_\_\_ 29. g

**Short Answer**

30. How does weight differ from mass?

31. The mass of a 5.00 cm3 sample of clay is 11.0 g. What is the density of the clay?

32. The density of lead is 11.35 g/cm3. What is the mass of a piece of lead with a volume of 10.0 cm3?

33. A sample of gold has a mass of 96.5g and a volume of 5.00cm. What is the density of gold?