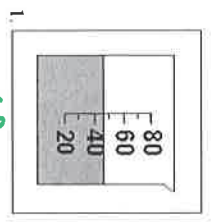
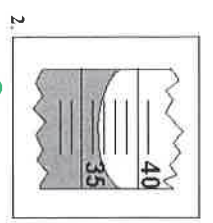


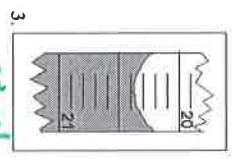
Using the rules for Significant Figures, determine the following measurements.



1. 48 mL



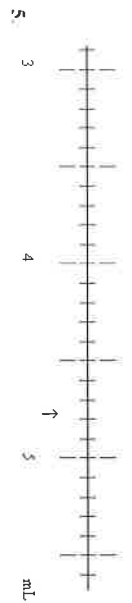
2. 36.5 mL



3. 20.34 mL



4. 8.25 cm



5. 4.79 mL



6. 2.4 cm

Write the following numbers in scientific notation.

7. 1.5690  $\times 10^{-2}$

8. 12,000  $\times 10^4$

9. 0.0345  $\times 10^{-2}$

Expand the following numbers.

10. 1.23  $\times 10^6$  1,230,000

11. 2.5  $\times 10^{-3}$  0.0025

12. 1.54  $\times 10^4$  15,400

13. 5.67  $\times 10^{-1}$  0.567

Give the number of significant digits in the following measurements.

14. 2.9910 m \_\_\_\_\_

15. 5600 km \_\_\_\_\_

16. 0.00670 kg \_\_\_\_\_

17. 0.09 g \_\_\_\_\_

Use dimensional analysis to convert the following measurements. Put the values in scientific notation if you feel it is necessary.

18. 4008 g to mg  
$$\frac{4008 \text{ g}}{1 \text{ g}} \times \frac{1000 \text{ mg}}{1 \text{ g}} = 4,008,000 \text{ (} 4.008 \times 10^6 \text{ mg)}$$

19. 48 mL to kL  
$$\frac{48 \text{ mL}}{1 \text{ mL}} \times \frac{1 \text{ L}}{1000 \text{ mL}} \times \frac{1 \text{ kL}}{1000 \text{ L}} = 0.000048 \text{ (} 4.8 \times 10^{-5} \text{ kL)}$$

20. 239 mm to cm  
$$\frac{239 \text{ mm}}{1 \text{ mm}} \times \frac{1 \text{ cm}}{10 \text{ mm}} = 23.9 \text{ cm}$$

21. 38 kg to mg  
$$\frac{38 \text{ kg}}{1 \text{ kg}} \times \frac{1000 \text{ g}}{1 \text{ kg}} \times \frac{1000 \text{ mg}}{1 \text{ g}} = 38,000,000 \text{ (} 3.8 \times 10^7 \text{ mg)}$$