

- 1.) Density = 14.0 g/cm^3
 mass = 24.0 g
 volume = ?

$$D = \frac{M}{V}$$

$$V = \frac{M}{D} = \frac{24.0 \text{ g}}{14.0 \text{ g/cm}^3}$$

- 2.) Mass = 18.6 g
 Volume = 38.2 cm^3
 Density = ?

$$D = \frac{M}{V} = \frac{18.6 \text{ g}}{38.2 \text{ cm}^3}$$

- 3.) Volume = 12.4 cm^3
 Density = 2.60 g/cm^3
 Mass =

$$V(D) = \left(\frac{M}{V}\right)V$$

$$M = VD = (12.4 \text{ cm}^3)(2.60 \text{ g/cm}^3)$$

1.) 380000
 5 4 3 2 1 $\boxed{3.8 * 10^5}$

4.) 0.00058
 1 2 3 4 $\boxed{5.8 * 10^{-4}}$

2.) 706000000
 $\boxed{7.06 * 10^8}$

5.) 0.00000732
 $\boxed{7.32 * 10^{-6}}$

3.) 891000
 $\boxed{8.91 * 10^5}$

6.) 0.0000901
 $\boxed{9.01 * 10^{-5}}$

Find the number of significant digits in each.

1.) 5.004 m (4)

2.) 0.0047 m (2)

0.0047 L 47 mL

3.) 6000 km (1)

4.) 200. cm (3)

200
↓
3

200
↑↑
2

5.) 4009 (4)

6.) 0.002230 mm (4)

200.0 (4)

7.) 9 planets ∞

8.) 40003 km (5)

9.) 5.000 cm (4)

6 oz / class 16 class / week 32 week / yr

16 oz / pound

pounds / yr

$$\frac{6 \cancel{\text{oz}}}{1 \cancel{\text{class}}} * \frac{16 \cancel{\text{class}}}{1 \cancel{\text{week}}} * \frac{32 \cancel{\text{week}}}{1 \boxed{\text{yr}}} * \frac{1 \boxed{\text{pound}}}{16 \cancel{\text{oz}}}$$

192 pounds / yr

