

Chapter 1

8) A number with 2 decimal places, eg 3.08 mL. The precision is determined by the larger graduated cylinder.

Often, in practice, the last digit is not estimated on a graduated cylinder.

Therefore the total volume would be 3.1 mL

20) Precise but not accurate

26)

a) 1 sf

e) 2sf

b) 2 sf

f) 3sf

c) 3 sf

g) 3 sf

d) 3 sf

h) 4. sf

28)

a) 5×10^2

c) 4.80×10^2

b) 4.8×10^2

d) 4.800×10^2

30)

a) 2.26

c) 1.5×10^5

b) 8.4×10^{22}

d) 6.67×10^{12}

32)

a) 6.32×10^{25}

e) 2.29×10^{-27}

b) 7.82×10^{-17}

f) 8.1×10^{-1}

c) 2.020×10^{-1}

g) 1.130×10^3

d) 1.161×10^{-2}

56) $V = 1.0 \times 10^2 \text{ cm}^3$, density = 6.2 g/cm^3

58) 49 carats

60) 11.7 mL

62) a. 1.0 kg feathers

b. 100 g water

c. same

64) $5.1 \times 10^3 \text{ cm}$