

Honors Chemistry 1

Hill_Petrucci

Chapter 1

Pgs 29 & 30 # 31,49,51,53,55,57

31. Yes. A set of measurements may contain a consistent error and thus be precise but not accurate.

Yes. If the errors in individual measurements cancel each other, then the average may be accurate, although imprecise.

49. a. 3

b. 3

c. 4

d. 4

e. 3

f. 4

51. a. $2.804 \times 10^3 \text{ m}$

b. $9.01 \times 10^2 \text{ s}$

c. $9.0 \times 10^{-4} \text{ cm}$

d. $2.210 \times 10^2 \text{ s}$

53. a. 505.5 m

b. 2120 , zero is not significant because there is no decimal

c. 0.00610

d. 40000 mL, last two zeros are not significant

55. a. 45.8 m

b. 167 cm

c. 44.5 g

d. 10.1 L

57. a. $2.32 \times 10^3 \text{ mm}^3$

b. $4.80 \times 10^3 \text{ cm}^2/\text{g}$

c. $4.6 \times 10^4 \text{ mm}^2/\text{mg}$

d. $1.92 \times 10^{-4} \text{ g/mL}$

