

Answer to Critical Questions 1

copy 1: 2.1 g mL⁻¹

copy 2: 8.370 mL

copy 3: 35.55 mL

copy 4: 5.52 g mL⁻¹

copy 5: 29.8 mL

copy 6: 1.61 g mL⁻¹

copy 7: 3.26 g mL⁻¹

copy 8: 8.359 mL

Answer to Critical Questions 2

copy 1: 5.99×10^3 g

copy 2: 43.2 g

copy 3: 3.93×10^3 g

copy 4: 6.12×10^3 g

copy 5: 0.0543 mol

copy 6: 0.644 mol

copy 7: 5.43 mol

copy 8: 5.94 mol

Answer to Critical Questions 3

copy 1: 1.35×10^{26}

copy 2: 7.53×10^{25}

copy 3: 6.80×10^{24}

copy 4: 3.91×10^{26}

copy 5: 3.10×10^{24}

Answer to Critical Questions 4

copy 1: 31.1 g *

copy 2: 2.13 g *

copy 3: 3.75 g *

copy 4: 642 g *

copy 5: 715 g *

copy 6: 43.9 g *

copy 7: 211 g *

copy 8: 344 g *

Answers to critical item questions 5

1. 1.71 M

2. 0.715 M

3. 1.67 M

4. 1.34 M

5. 1.26 M

6. 0.2353 M

Answers to critical item questions 6

1. 0.10 M

2. 1.33 M

3. 13.6 mL

4. 82.5 mL

5. 20 mL

6. 0.0750 M

Answers to critical item questions 7

1. 0.1490 M

2. 0.07893 M

3. 0.1341 M

4. 0.1052 M

5. 0.3157 M

6. 0.04965 M

Answers to critical item questions 8

1. 25 atm

2. 23.5 L

3. 304.7 K

4. 0.224 mol

5. 5.71 atm

6. 3.92 L

7. 381 K

8. 0.233 mol

Answers to critical item questions 9

1. 10 atm

2. 1.0 gal

3. 217°C

4. 27.8 mol

5. 12.5 atm

6. 1.67 gal

7. 686 K (413°C)

8. 136 mol

Answers to critical item questions #10

1. 22 atm

2. 15 L

3. 78 L

4. 46atm

5. 12.5 L

6. 4.33 atm

7. 54 L

8. 54 atm

Answers to Critical Question 11

A 0.161

B 300

C 560

D 0.560

E 103

F 1056

G 0.795

H 487

I 519

J 0.912

K 246

L 1864

Answers to Critical Question 12

- 1 23.10 (0.03039)
- 2 21.06 (0.02771)
- 3 22.99 (0.03026)
- 4 22.61 (0.02974)
- 5 22.56 (0.02969)
- 6 22.41 (0.02950)
- 7 22.71 (0.02988)
- 8 22.65 (0.02980)
- 9 23.31 (0.03068)
- 10 23.00 (0.03026)
- 11 21.28 (0.02800)
- 12 23.02 (0.03029)