Chapter 4 Gifted and Enrichment Answers

1. Total = 4.8 + 6.2 + 2.1 + 0.78 + 0.92
= 14.8 mg
Percent of chemical A = $\frac{4.8}{14.8} \times 100$
= 32.4%
Percent of chemical B = $\frac{6.2}{14.8} \times 100$
= 41.9%
Percent of chemical C = 2.1 mg
= $\frac{2.1}{14.8} \times 100 = 14.2\%$
Percent of chemical D = 0.78 mg
= $\frac{0.78}{14.8} \times 100 = 5.3\%$
Percent of chemical E = 0.92 mg
= $\frac{0.92}{14.8} \times 100 = 6.2\%$

2. Loss of body mass in 20 min = 2% of 64.8 kg = 0.02 × 64.8 = 1.3 kg
Loss of body mass in 1 h = 3 × 1.3
= 3.9 kg
1 L of water has a mass of 1 kg.
2.5 L of water have a mass of 2.5 kg.
Total loss of body mass = 3.9 – 2.5 = 1.4 kg
Percent of body mass lost = $\frac{1.4}{64.8} \times 100$
= 2.2%
Her body mass would be reduced by 2.2%.

3. 1.5 L = 1500 mL
water: 1 L = 1000 mL;
$\frac{1000}{1500} = \frac{2}{3} = 66.\overline{6}\%$
apple juice: $\frac{200}{1500} = \frac{2}{15} = 13.\overline{3}\%$
pear juice: $\frac{150}{1500} = \frac{1}{10} = 10\%$
grape juice: $\frac{100}{1500} = \frac{1}{15} = 6.\overline{6}\%$
sugar syrup: $\frac{50}{1500} = \frac{1}{30} = 3.\overline{3}\%$

4. Total playing time = 32 min 6 s + 38 min 51 s + 21 min 32 s + 27 min 48 s + 36 min 31 s
= 154 min 168 s
= 156 min 48 s
= $156\frac{48}{60}$ min
= 156.8 min
Total number of baskets scored
= 6 + 7 + 5 + 4 + 9 = 31
Time needed to score one basket
= $\frac{156.8}{31}$ = 5.1 min
0.1 × 60 s = 6 s
Frank must play an average of 5 min 6 s to score a basket.

5.

	Total for Six Weeks
Food	$50.05
Entertainment	$84.46
Clothes	$111.54
Transportation	$43.00
Miscellaneous	$59.83
Savings	$165.00
Total	$513.88

Total earnings for six weeks = $513.88
Total savings in six weeks = $165.00
Percent of earnings put into savings
= $\frac{165}{513.88} \times 100 = 32.11\%$