

1.7 HOMEWORK HANDOUT: RATIOS, RATES, DECIMALS AND PERCENTS

PART A

1. Write each ratio in simplest form.

- a) 6:12 b) 15:5 c) 16:40 d) 100:30

2. Calculate each unit rate.

- a) A bus travelled 288 km in 3 h b) Franco swam 50 m in 40 s c) Four lemons cost \$1.40

3. Which brand of maple syrup is a better buy?
500 mL

Brand A: \$12.75 for 375 mL **Brand B:** \$15.25 for 500 mL

4. Express as a percent. Round to one decimal place, if necessary.

- a) 0.245 b) $\frac{3}{8}$ c) 1.12 d) 0.0018

5. Write each as a decimal.

- a) 17% b) 33.3% c) 4% d) 105%

6. Calculate.

- a) 25% of 40 b) 109% of 75 c) 0.7% of 95

7. Rohan and Murray work at different coffee shops. Rohan earns \$35 for 4 h of work. Murray earns \$49.50 for 6 h of work. Who receives the better pay?

8. The human body's mass is made up of 1.5% calcium. What amount of calcium is in a body having mass of 60 kg?

9. A cat's heartbeat is recorded at 36 beats in 15 s. A dog has a heartbeat of 71 beats in 39 s. Which animal has the faster heartbeat?

PART B

1. Write the ratio in simplest form. a) $3\frac{2}{3} : 7\frac{1}{3}$ b) $\frac{-1}{2} : 2\frac{1}{3}$

2. Allison jogged 7 km in 40 minutes while training for rugby. At this rate, what distance will she cover in $1\frac{1}{2}$ hours?

3. To make 1500 mL of orange juice, Tamara uses 375 mL of frozen concentrate and 1125 mL of water.

a) Write a ratio, in simplest form, to compare the amount of frozen concentrate to the total amount of orange juice.

b) Write a ratio, in simplest form, to compare the amount of water to the total amount of orange juice.

c) How much frozen concentrate and water are needed to make 1000 mL of the orange juice?

ANSWERS:

Part A 1.a) 1:2 b) 3:1 c) 2:5 d) 10:3 2. a) 96 km/h b) 1.25 m/s c) \$0.35/lemon 3. Brand B 4. a) 24.5% b) 37.5% c) 112% d) 0.18% 5.a) 0.17 b) 0.333 c) 0.04 d) 1.05 6.a) 10 b) 81.75 c) 0.665 7. Rohan 8. 0.9 kg 9. Cat

Part B 1. a) 1:2 b) -3:14 2. 15.75 km 3.a) 1:4 b) 3:4 c) 250 mL of concentrate, 750 mL of water

