



Grade 6 Warm Up
Date: Sept. 24



1) Show work to solve for the missing value

a) $t : 18 = 6 : 3$
 $t = 36$

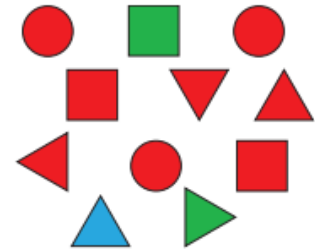
b) $v : 60 = 3 : 10$
 $v = 18$

2) a) Write a part to whole ratio for the following diagram?

Squares : to all shapes
 3 : 11

b) What is the ratio of circles to triangle?

C : T
 3 : 5



c) What ratio could be represented with 3 : 5?

C : T

Worksheet

Solutions

1) Express each unit rate using symbols.

a. Serena walks 4 km in 1 hr. 4 km/ hr

b. Sanjit reads 3 books in 1 week. 3 books/ week

c. The tap drips 25 drops in 1 min. 25 drops/ min

2) Express as a rate then a unit rate.

a. Betty drives her car 150 km in 2 h.

150 km/ 2 hr

75 km /hr

b. The helicopter travels 180 km in 3 h. 180 km/ 3 hr
60 km /hr

3) Which sentences are ratios? Which sentences are rates?
Write each using the symbol " / " (Make sure to include units)

a. The cost of pecans is \$10.89 for each kilogram.

Rate \$10.89 / kg

b. Three out of every seven people are wearing glasses.

Ratio wear glasses: total

3 : 7

c. Mr. Thompson travelled 620 km in 6 h.

Rate 620 km / 6 hr

d. Each block of a quilt has 5 red patches, 4 yellow patches,
and 6 blue patches.

Ratio red patches: yellow patches :blue patches

5 : 4 : 6

e. In 4 classrooms, there are a total of 65 phones.

Rate 65 phones / 4 classrooms

4) Maria charged \$15 for 3 h of babysitting.

a) What is Maria's rate per hour? Rate $\frac{\$15}{3 \text{ hr}}$ $\div 3$
 $\frac{\$5}{1 \text{ hr}}$ $\div 3$
 Maria charges \$5 for 1 hours.

b) How much does Maria charge for 5 h of babysitting?

Rate $\frac{\$5}{1 \text{ hr}}$ $\times 5$
 $\frac{\$35}{5 \text{ hr}}$ $\times 5$
 Maria charges \$35 for 5 hours.

c) How many hours does Maria have to babysit to earn \$50?

Rate $\frac{\$5}{1 \text{ hr}}$ $\times 10$
 $\frac{\$50}{10 \text{ hr}}$ $\times 10$
 To earn \$50, Maria has to work 10 hours.

Class /Homework

Check

4. Express each unit rate using symbols.
 - a) Morag typed 60 words in 1 min.
 - b) Peter swam 25 m in 1 min.
 - c) Abdul read 20 pages in 1 h.
5. Express as a rate first, then unit rate
 - a) June cycled 30 km in 2 h.
 - b) A caribou travelled 12 km in 30 min.
 - c) A plane flew 150 km in 15 min.
6. Express as a rate first, then unit rate
 - a) Elsie delivered 220 flyers in 4 h.
 - b) Winston iced 90 cupcakes in 1.5 h.
 - c) The temperature rose 18°C in 4 h.
7. Which sentences use ratios? Which sentences use rates? How do you know?
 - a) The car was travelling at 60 km/h.
 - b) Katie earns \$8/h at her part-time job.
 - c) The punch has 3 cups of cranberry juice and 4 cups of ginger ale.
 - d) The soccer team won 25 games and lost 15 games.

Apply

8. Express as a rate first, then unit rate
 - a) Milk costs \$4.50 for 4 L.
 - b) Corn costs \$3.00 for 12 cobs.
 - c) 24 cans of iced tea cost \$9.99.
9. Lindsay has scored 15 goals in 10 lacrosse games this season.
 - a) What is her unit rate of scoring?
 - b) How many goals might Lindsay score in 35 games? What assumptions do you make?

10. Before running in a 100-m race, Gaalen's heart rate was 70 beats/min. Which do you think is more likely after the race: 60 beats/min or 120 beats/min? Explain.
11. Ribbon costs \$1.44 for 3 m.
 - a) What is the cost per metre? *Express as a rate first, then unit rate*
 - b) How much would 5 m of ribbon cost?
 - c) How much ribbon could you buy for \$12?
12. Monique worked as a cleaner at the Calgary Stampede and Exhibition. She was paid \$84 for an 8-h day.
 - a) What was Monique's hourly rate of pay?
 - b) How much would Monique earn for 35 h of work?



13. A 400-g package of Swiss cheese costs \$4.80.
 - a) What is the cost per 100 g?
 - b) How much would 250 g cost?
 - c) How much would 1 kg cost?
 - d) How much Swiss cheese could you buy with \$18?

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4a) 60 words / min b) 25m / min

c) 20 pages / hr

5a) $\begin{matrix} \div 2 & \left(& 30 \text{ km} & / & 2 \text{ hr} & \right) \div 2 \\ & & 15 \text{ km} & / & 1 \text{ hr} & \end{matrix}$

b) $\begin{matrix} \div 30 & \left(& 12 \text{ km} & / & 30 \text{ min} & \right) \div 30 \\ & & & / & 1 \text{ min} & \end{matrix}$

Attachments

Hundreds chart.jpg