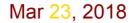
Warm Up Grade 8



Test Wed. Apr 4



1) In the NHL, the ratio of shots taken to the goals scored by an all-star player is 9:2. The player has a 50-goal season. How many shots did he take?

The took 205 Shots.

2) The scale on a map of Manitoba is 1 : 5 000 000. This means 1 cm on the map represents 5 000 000 cm actual distance. The map distance between two towns is 3.4 cm. What is the actual distance between the two towns?

Extra Practice 8

e)
$$5:5=18:6$$

= $9:3$
 $5:5=3:1_{x5}$
 $b=15$

$$3) \stackrel{?}{2} : 7 = 20: d$$

$$d = 70$$

i)
$$45:30 = 6:5$$

 $9:6 = 6:4$
 $3:2 = 6:4$
 x_2
 x_2
 x_2

d)
$$P:12 = 15:10$$

 $P:12 = 3:2$
 $X6:X6$
 $P=18$

$$f_1 = 6:33$$

 $f_2 = 6:33$
 $f_3 = 3$

189 people preferred Broad X

4. Boards:
$$5 \times 126$$

5: 3 = 5: 126
 126×126
 126×126
 126×126

210 snowboards were rented

5. Blueprint: actual = B: a
$$1 : 40 = 1:3.4$$

$$0.025: 1 = 0.085: 3.4$$

$$1 : 40$$

$$0.025: 1 = 0.085: 3.4$$

B) reprint: actual =
$$B:a$$

1: $40 = 2.4.8$
 $0.025:1 = 0.12:4.8$
 4.8×4.8

The room on the blueprint would be 0.085:0.12 or 8.5cm by 12cm

The length of the painting is 75 cm

12 students take trumpet

b) pian: trumpet =
$$P:t$$

8:3 = _:12
+4 ×4 32

32 students take piano

On the map, the distance is 8.5cm.

Rates and Ratios

A <u>ratio</u> is a comparison between two things.

- Rate is the relationship between two different units of measurement, such as meters and seconds, or dollars and hours.
- ·A unit rate is when the second term in the ratio is always 1.

Rates are often written using a slash / which means per.

Ex: km/hr means kilometers per hour beats/min means heartbeats per minute \$/hr mean the amount of money per hour

The slash (/) or term per means for every one.

Canadian speed skater Jeremy Wotherspoon, of Red Deer, Alberta, set the world record for the 500 m at the 2004 World Cup in Italy. He skatet at an average speed of 14.44 m/s. The white-tailed deer can run at speeds of up to 30 km/h.

Who is faster? How can you find out?

watch units what is this in m/s?



$$\frac{30 \, \text{km}}{1 \, \text{hr}} = \frac{30 \, 000 \, \text{m}}{3600 \, \text{s}}$$

Deer
$$\frac{30\ 000\ \text{m}}{3600\ 5} \stackrel{\div 3600}{\Longrightarrow} 15$$

When we compare two things with different units, we haverate.

Here are some rates:

- We need 5 sandwiches for every 2 people.
- Oranges are on sale for \$1.49 for 12.
- Gina earns \$4.75 per hour for baby-sitting.
- There are 500 sheets on one roll of paper towels.

The last two rates areunit rates.

Unit Rate compares a quantity to 1 unit.

*Rates cannot be expressed as percents since they compare two different quantities.

Part a) Express each unit rate using symbols.

- 1. Serena walks 4 km in 1 hr. 4km/hr
- 2. Sanjit reads 3 books in 1 week. 3 book / luck
- 3. The tap drips 25 drops in 1 min.

- Part b) Express as a unit rate.

 1. Betty drives her car 150 km in 2 h. 150 km /2 h 150 km/lh
- 2. The helicopter travels 180 km in 3 h.

Which sentences are ratios? Which sentences are rates? How do you know?

- 1. The cost of pecans is \$10.89 for each kilogram.
- 2. Three out of every seven people are wearing glasses.
- Patio toble people: tople
- 3. Mr. Thompson travelled 620 km in 6 h.
- 4. Each block of a quilt has 5 red patches, 4 yellow patches, and 6 blue patches.
- 5. In 7 games, the team scored a total of 23 points.

games: point

Maria charged \$15 for 3 h of babysitting.

- a) What is Maria's rate per hour?
- b) How much does Maria charge for 5 h of babysitting?
- c) How many hours does Maria have to babysit to earn \$50?

In order to make \$50 Maria must work 10hr.

Class/Homework

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Wednesday April 4 on Unit 5 Percents, Ratios and Rates

To find unit rates, we can use diagrams, tables, and graphs.

A printing press prints 120 sheets in 3 min.

- a) Express the printing as a unit rate. (diagram)
- b) How many sheets are printed in 1 h?

Use the data in Example 1. How long will it take to print 1000 sheets?

Time (min)	5	10	15	20	25
Sheets Printed					

