



Warm Up Grade 8

Mar. 26, 2018



$$1\text{m} = 100\text{cm}$$

$$1\text{km} = 1000\text{ m}$$

$$1\text{hr} = 60\text{ min} = 3600\text{ sec}$$

1. A human walks at an average speed of 5 km/h.
What is this speed in meters per second?

$$\frac{5\text{ km}}{1\text{ hr}} \xrightarrow{\text{change units}} \frac{5000\text{ m}}{3600\text{ sec}} \xrightarrow{\div 3600} \frac{1.38\text{ m}}{1\text{ sec}}$$

$$5\text{ km} = 5000\text{ m}$$

$$1\text{ hr} = 3600\text{ s}$$

#5
 ☆ $\$399 / 3 \text{ week}$
 $\div 3 \quad \div 3$
 $\$133 / 1 \text{ week}$

b) $680 \text{ km} / 8 \text{ h}$
 $\div 8 \quad \div 8$
 $85 \text{ km} / \text{hr}$

c) $\$3.49 / 12 \text{ bottles}$
 $\div 12 \quad \div 12$
 $\$0.29 / \text{bottle}$

d) $\$0.99 / 3 \text{ cans}$
 $\div 3 \quad \div 3$
 $\$0.33 / 1 \text{ can}$

☆ 6) a) $\$24 / 3 \text{ hr}$
 $\div 3 \quad \div 3$
 $\$8 / \text{hr}$

or $\$36 / 4 \text{ h}$
 $\div 4 \quad \div 4$
 $\$9 / \text{h}$
 greater

b) $\$4.50 / 6 \text{ muff}$
 $\times 2 \quad \times 2$
 $\$9. / 12 \text{ muff}$
 greater Rate

or $\$6 \text{ for } / \text{ doz}$
 $\$6 \text{ for } 12 \text{ muff}$
 Better deal

c) $0.99 / 250 \text{ mL}$
 $\times 4$
 $\$3.96 / 1000 \text{ mL}$
 $3.96 / 1 \text{ L}$
 greater

$3.49 / 1 \text{ L}$
 Better deal

☆ 7) a) A
 $1.49 / 110 \text{ mL}$
 $\div 110 \quad \div 110$
 $\$0.0135 / \text{mL}$

B
 $\$4.29 / 500 \text{ mL}$
 $\div 500 \quad \div 500$
 $0.00858 / \text{mL}$

b) Might only need a small quantity

d) cheaper \uparrow better deal

★ 8) \$ 1.99 / 5 gf or 2.99 / 8 gf
Estim Estim
\$ 16 / 40 \$ 15 / 40
Better deal

★ 11a) Petra \$ 370 for 40h
÷40 ÷40
\$9.25 / hour

11a) Giorgos \$ 315 for 35h
÷35 ÷35
\$9.00 / hour

Petra gets paid more

Comparing Rates

You can compare rates the same way that you compare ratios;

- Find the unit rate
- or find equivalent rates which have 1 of the terms the same.

Example:

Which is a better deal?

A - 2 apples for \$0.68

or B - 8 apples for \$2.60

- find the unit rate

A

$$\begin{array}{r} \$0.68 \\ \div 2 \\ \hline \$0.34 \end{array} \quad \begin{array}{l} / 2 \text{ Apple} \\ / \text{ Apple} \end{array}$$

B

$$\begin{array}{r} \$2.60 \\ \div 8 \\ \hline \$0.325 \end{array} \quad \begin{array}{l} / 8 \text{ Apples} \\ / \text{ Apple} \end{array}$$

Better buy

Or

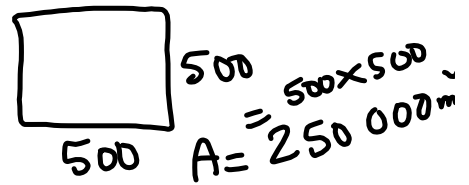
- change both to the cost for 8 apples

A - 8 apples (0.68×4)

= \$2.72 for 8 apples

B - \$2.60 for 8 apples

Class/Homework



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#14, #16 (need to find area of the square park first)

$$2.5 \text{ kg} / 1200 \text{ m}^2 = x \cdot 250\,000 \text{ m}^2$$

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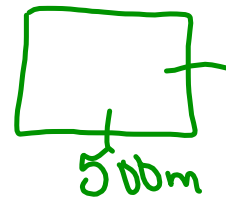
#1, #2, #3, #4, #5a, #7, #11, #12, #20

April 4 Test

16) $2.5 \text{ kg} / 1200 \text{ m}^2$ $\xrightarrow{\times 208.33}$

x $/$ $250\,000 \text{ m}^2$ $\xrightarrow{\times 208.33}$

520.83 kg



$$A = L \times W$$

$$= 500 \times 500$$

$$= 250\,000 \text{ m}^2$$

$$2.5 \text{ kg} / 1200 \text{ m}^2$$

$\div 120$

$$0.00208\bar{3} / 1 \text{ m}^2$$

$\times 250\,000$

$$\underline{520.83 \text{ kg}} / 250\,000 \text{ m}^2$$

$\times 250\,000$