

You need out your warm up & agenda

Homework: Review Sheet. TEST TOMORROW

Warm UP:

1) Henry's Earnings

hours $x$	money $y$
2	\$30
3	\$45
4	\$60

$$\frac{y}{x}$$

Find  $k$ . Then find the equation using  $y = kx$

$$\frac{30}{2} = 15 \quad \frac{45}{3} = 15 \quad \frac{60}{4} = 15$$

$$y = 15x$$

2) I can bake  $\frac{2}{3}$  a cake in 8 minutes. How much can I bake in 1 minute?

$$\frac{\frac{2}{3}}{8} = \frac{2}{3} \div 8 = \frac{2}{3} \cdot \frac{1}{8} = \frac{2}{24} = \frac{1}{12}$$

$$\frac{1}{12} \text{ in 1 min}$$

Unit 3-cheat sheet

Unit Rate (r)

$$\frac{m}{t}$$

Proportions

$$\frac{m}{t} = \frac{\quad}{\quad}$$

Scale factor

$$\frac{m}{a} = \frac{\quad}{\quad}$$

direct variation

$$\frac{y}{x} = k$$

tax, tip, discount  
markup

① % → decimal

② x

③ +

— ↓ discount

Commission

$$C = \% \cdot \text{sales}$$

total pay =

Salary +  
Commission

$$I = P \times R \times T$$

Interest      Principal      Rate      Time

÷ fractions

K.C.F

1. Simplify the following:

$$\frac{2\frac{7}{3}}{4\frac{3}{3}}$$

$$2\frac{7}{3} \times \frac{4\frac{3}{4}}{4\frac{3}{4}} = \frac{28}{6}$$

$$3\frac{1}{2} \cdot \frac{7}{2}$$

The following table shows different sizes of cans of peanuts and their cost.

Cans of Peanuts

Size (oz)	Cost (\$)
5	2.25
10	3.50
20	10.00

Which can size has the lowest unit cost?

10 oz

$$\frac{2.25}{5} = .45 \quad \frac{3.50}{10} = .35 \quad \frac{10.00}{20} = .50$$

$\frac{m}{t}$

3. I can bake  $\frac{3}{4}$  of a cake in 5 minutes. How much of the cake can I bake in 1 minute?

$$\frac{m}{t} \quad \frac{\frac{3}{4}}{5} \quad \frac{3}{4} \div \frac{5}{1} \quad \left( \frac{3}{20} \right)$$

4. What 2 things MUST be true for a graph to be proportional?

- ① straight line
- ②  $(0,0)$  = origin

CROSS PRODUCTS = X across

5. Are the following ratios proportional?

$\frac{150}{300}$  and  $\frac{450}{600}$

135,000

90,000

NO

~~$\frac{2}{8}$  and  $\frac{3}{12}$~~  24  
 ~~$\frac{2}{8}$  and  $\frac{3}{12}$~~  24 ✓ ;)

6. If you can bake 26 cookies in 8 minutes, how many cookies can you bake in 32 minutes?

$\frac{m^{\text{cookies}}}{t^{\text{mins}}} = \frac{x}{32}$   
 $\frac{26}{8} = \frac{x}{32}$

$8x = 832$   
 $\frac{8x}{8} = \frac{832}{8}$   
 $x = 104$  cookies

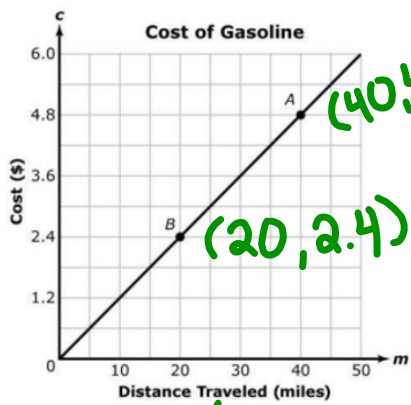
7. Does the following table show direct variation? yes

Find k 3.2  $y = kx$   
 $y = 3.2x$

X	4	6	7	9
y	12.8	19.2	22.4	28.8

$$\frac{y}{x} = \frac{12.8}{4} = \frac{19.2}{6} = \frac{22.4}{7} = \frac{28.8}{9} = 3.2$$

8.



The following graph shows the relationship between the cost of gas and distance traveled.

Find k: .12

$k = \frac{y}{x}$

$\frac{2.4}{20} = .12$

$\frac{4.8}{40} = .12$

(x, y)



9. The actual distance between LA and San Francisco is 150 miles. The scale for the map is 1 cm = 40 miles. How far apart are the two cities on the map?

$$\frac{1 \text{ cm}}{40 \text{ miles}} = \frac{x}{150}$$

$$40x = 150$$

$$\frac{40x}{40} = \frac{150}{40}$$

$$x = 3.75$$

10. You can read  $\frac{1}{3}$  of a book in  $\frac{3}{5}$  of an hour. How much can you read in 1 hour?

11.

Juanita's Savings	
Time (Weeks)	Savings (Dollars)
2	\$30
3	\$45
4	\$60

Find the constant of proportionality in the table.

Then find the equation in the  $y = kx$  form.

Sit Silently