

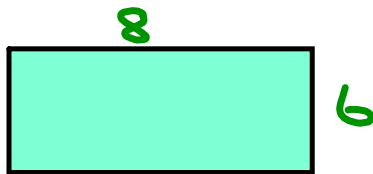
you need out your agenda, warm up, & hw

Homework: Direct Variation: 1, ~~3~~, 4

Warm Up:

~~3~~
3

1) You are making a model of your room using a scale of 2 inches = 6 feet. The dimensions of your room are length 8 inches and width 6 inches. Find the actual area of your room.



L =

W =

A =

constant rate of change
=
direct variation
=
constant of proportionality
=
K

$$K=2$$

cups of water (x)	1	2	3	4
tsp of crystal light (y)	2	4	6	8

Is there a constant rate of change? **yes**

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

$$\frac{2}{1}$$

$$\frac{4}{2}$$

$$\frac{6}{3}$$

$$\frac{8}{4}$$

$$2$$

$$2$$

$$2$$

$$2$$

NO K

cups of water (x)	2	4	6	8
tsp of crystal light (y)	1	2	3	5

Is there a constant rate of change? NO

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

$$\frac{1}{2} = .5$$

$$\frac{2}{4} = .5$$

$$\frac{3}{6} = .5$$

$$\frac{5}{8} = .625$$

You need out your warm up, Agenda, Calculator, hw from last night

Homework: Direct Variation. Mini* quiz tomorrow

Opening:

1) Zach drew a picture of Spongebob. His arm in the picture is 3 cm. If he used a scale of 2 cm = 1.2 feet. How long is his actual arm?

2) Mrs. Sangster can make 2 gallons of lemonade in 5 minutes. How many gallons can she make in 20 minutes.

Important Vocab

- > Independent Variable-
- > Dependent Variable-
- > Constant Rate of Change-
- > Direct Variation-
- > Constant ~~Rate of Change~~
of Proportionality-

Direct Variation

Tables

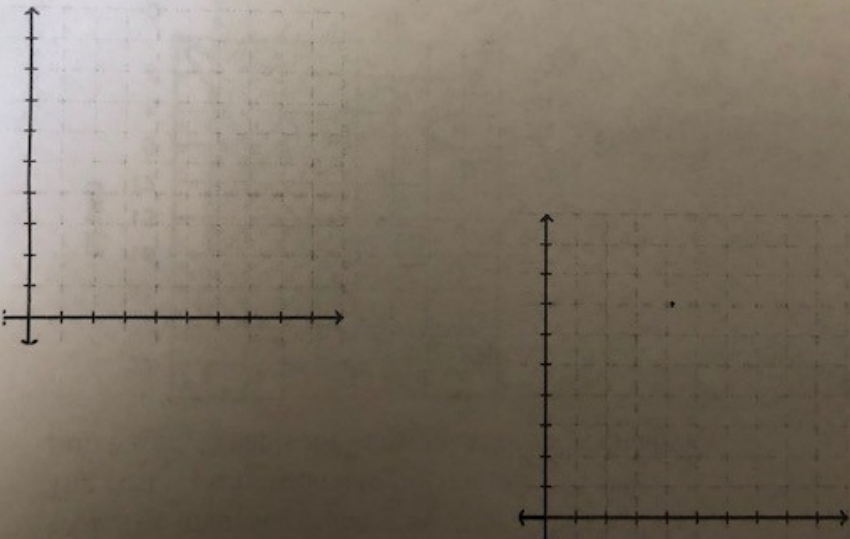
x	y

x	y

Direct Variation

Direct variat

Graphs

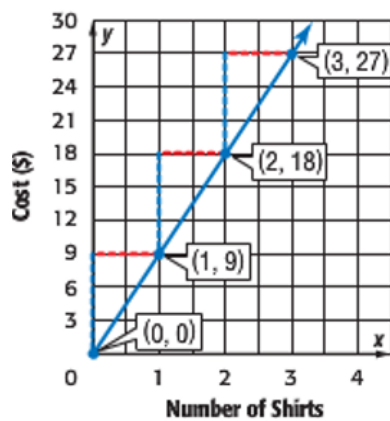


The image shows a page from a notebook with two blank coordinate planes. Each plane consists of a horizontal x-axis and a vertical y-axis, both with arrows at their ends. The axes are marked with small tick marks. The planes are set against a light-colored grid background. The word "Graphs" is written in the center of the page, and the words "Direct variat" are partially visible at the top right. A vertical line is drawn on the right side of the page.

Direct Variation

Equations

$$y = kx$$



-Find each rate of change:

-So what is my constant of proportionality or k?

Ex: 2

Number of Pizzas	1	2	3	4
Cost (\$)	\$11	\$19	\$27	\$35

-Find each rate of change:

- $k =$

EX 3: Determine the constant of proportionality:

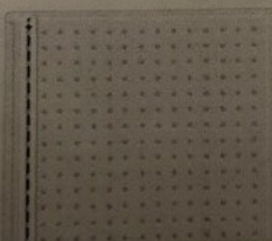
Cleo bought 36 stamps
and paid \$12. Ned
paid \$6 for 18 stamps.
Assume the amount paid
for stamps is proportional
to the number of stamps
purchased.

$$\frac{\$}{s} \quad \frac{12}{36} \cdot .33 \quad \frac{6}{18} \cdot .33$$

$$k = \overline{.3} \quad \text{or} \quad \overline{.33}$$

EX 4:

Yesterday, Maria had 4 nickels and 3 dimes in her wallet. Today, she has 12 nickels and 9 dimes. If the number of dimes is proportional to the number of nickels, what is the constant of proportionality?



Direct Variation- Homework

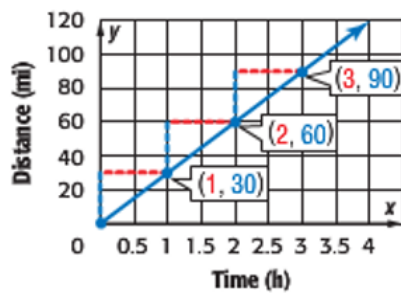
1)

Hours (x)	1	2	3	4
Cookies Baked (y)	10	20	30	40

-Find each rate of change:

-Find k:

2)



- Find each rate of change:

-Find k:

3)

(Hours) x	1	2	3	4
(Dollars) y	\$15	\$30	\$45	\$60

-Find each rate of change:

-Find k:

4)

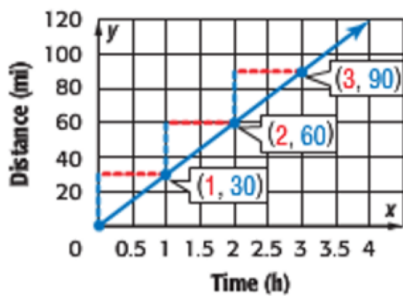
(hours) x	1	3	6	7
(Cookies eaten) y	12	13	14	15

-Find each rate of change:

-Find k :

ticket OTD constant rate of change?

2)



- Find each rate of change:

- Find k:

3)

cups of h ₂ o x	2	4	6
kool aid y	10	20	34

sit silently for news