

1.)

x	y	$k = \frac{y}{x}$
2	6	$\frac{6}{2} = 3$
5	15	$\frac{15}{5} = 3$
8	24	$\frac{24}{8} = 3$
12	36	$\frac{36}{12} = 3$

yes  $y = 3x$

2.)

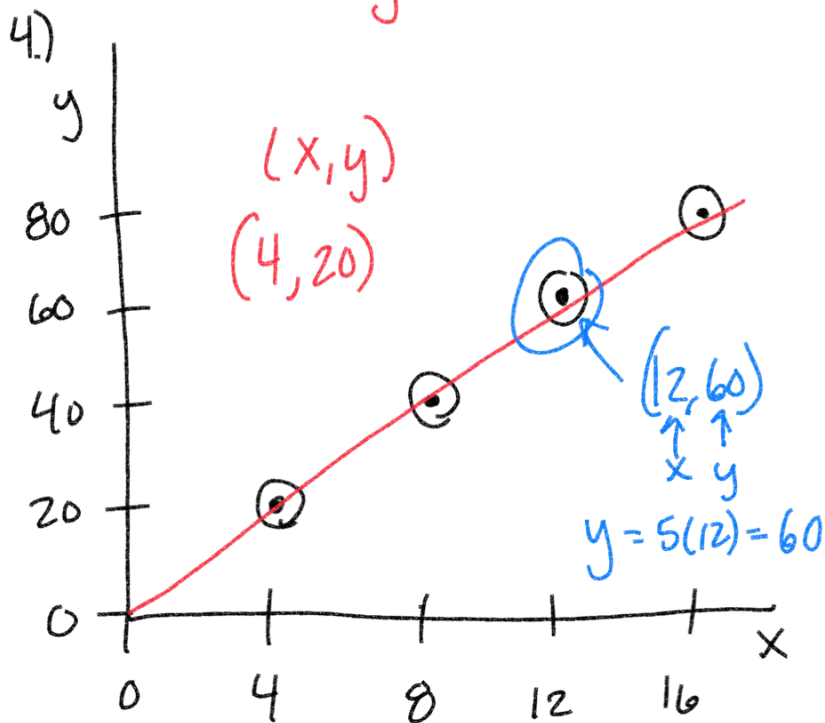
x	y	$\frac{y}{x}$
3	6	$\frac{6}{3} = 2$
7	10	$\frac{10}{7} = 1.42857...$
9	12	
10	13	

No!

3.)

x	y	$\frac{y}{x}$
2	3	$\frac{3}{2}$
4	6	$\frac{6}{4} = \frac{3}{2}$
8	12	$\frac{12}{8} = \frac{3}{2}$
12	18	$\frac{18}{12} = \frac{3}{2}$

yes!  $y = \frac{3}{2}x$



$k = \frac{y}{x} = \frac{20}{4} = 5$

$y = 5x$

5.)

x	4	12	16	24
y	3	9	12	18

$k = \frac{y}{x} = \frac{3}{4}$

$y = \frac{3}{4}x$

sushi  $\rightarrow$  28  
weight  $\rightarrow$  115

$$\begin{array}{l} \text{Weight} \\ \text{sushi} \end{array} \frac{115}{28} = \frac{1070}{X}$$

sushi  $\rightarrow$  \_\_\_\_\_  
weight  $\rightarrow$  1070

$$\frac{115X}{115} = \frac{(28)(1070)}{115}$$

$$X = \frac{(28)(1070)}{115} \approx 260$$

sushi  $\rightarrow$  28  
weight  $\rightarrow$  115

sushi  $\rightarrow$  150  
weight  $\rightarrow$  ?

$$\begin{array}{l} \text{Weight} \\ \text{sushi} \end{array} \frac{115}{28} = \frac{X}{150} \quad \frac{(115)(150)}{28} = \boxed{616}$$

1.) Over the span of  $\textcircled{3}$  days, Nate ate  $\textcircled{84}$  donuts.  
If he has similar plans over his 7-day  
Spring Break, how many donuts will he eat?

$$\begin{array}{l} \text{Donuts} \rightarrow 84 \\ \text{days} \rightarrow \boxed{3} \end{array} = \frac{X}{7}$$

$$\frac{(84)(7)}{3} = \boxed{196 \text{ donuts}}$$

2.) 120 days

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

$$k = \frac{84}{3} = \boxed{28}$$

$$y = kx$$

$$\boxed{y = 28x}$$

$x \rightarrow$  independent

$y \rightarrow$  dependent

$x = 3 \text{ days}$   $y = 84 \text{ donuts}$

$$\frac{\quad}{32} = \frac{50}{\boxed{100}}$$

$$\frac{(32)(50)}{100} = \frac{1600}{100} = \boxed{16}$$

$$\frac{\quad}{65} = \frac{80}{\boxed{100}}$$

$$\frac{(80)(65)}{100} = \frac{5200}{100} = 52$$

$$\frac{\quad}{25} = \frac{12}{\boxed{100}}$$

$$\frac{(25)(12)}{100} = \boxed{3}$$

$$1.) \frac{\quad}{44} = \frac{25}{\boxed{100}}$$

$$\frac{(44)(25)}{100} = \frac{1100}{100} = \boxed{11}$$

$$2.) \frac{\quad}{35} = \frac{20}{100}$$

$$\frac{(35)(20)}{100} = \frac{700}{100} = \boxed{7}$$

$$3.) \frac{\quad}{24} = \frac{25}{100}$$

$$\frac{(24)(25)}{100} = \frac{600}{100} = \boxed{6}$$

$$4.) \frac{8}{20} = \frac{\quad}{100}$$

$$\frac{(8)(100)}{20} = \frac{800}{20} = \boxed{40}$$

Nate ate 108 cookies in 4 hours.

If cookies =  $y$  and hours =  $x$ , write  
as an equation

proportionality  
constant

$$k = \frac{y}{x} = \frac{108}{4} = (27)$$

$$\boxed{y = 27x}$$