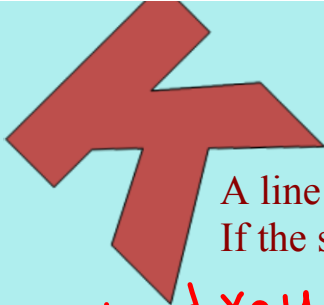




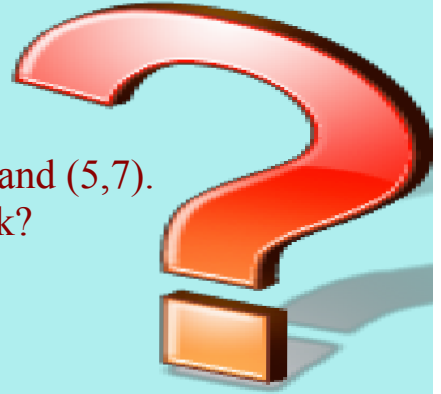


$$m = \frac{y_2 - y_1}{x_2 - x_1}$$





A line passes through the points (2, k) and (5, 7).  
If the slope is  $\frac{2}{3}$ , what is the value of k?



*1st*  $x_1, y_1$  *2nd*  $x_2, y_2$   
 $(2, k) (5, 7)$

$$m = \frac{2}{3}$$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{2}{3} = \frac{7 - k}{5 - 2}$$

~~$$\frac{2}{3} = \frac{7 - k}{3}$$~~

$$3(7 - k) = 6$$

$$21 - 3k = 6 - 21$$

$$\frac{-3k}{3} = \frac{-15}{3}$$

$$k = 5$$



$(x_1, y_1)$

A line passes through the points  $(-7, -8)$  and  $(k, -4)$ .

If the slope is ~~is~~  $-\frac{4}{3}$ , what is the value of  $k$ ?

$1^{st}$   $x_1, y_1$  and  $x_2, y_2$   
 $(-7, -8)$  and  $(k, -4)$   
 $m = -\frac{4}{3}$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$-\frac{4}{3} = \frac{-4 - (-8)}{k - (-7)}$$

$$-\frac{4}{3} = \frac{-4 + 8}{k + 7}$$

$$-4(k+7) = 12$$

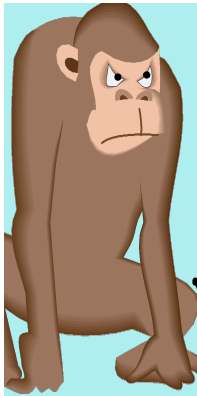
$$-4k - 28 = 12 + 28$$

$$-4k = 40$$

$$\frac{-4k}{-4} = \frac{40}{-4}$$

$$k = -10$$





A line passes through the points  $(2, k)$  and  $(k, -3)$ .  
 If the slope ~~is  $-2$~~ , what is the value of  $k$ ? is  $-2$

1st  $x_1, y_1$  and 2nd  $x_2, y_2$   
 $(2, k)$   $(k, -3)$

$m = -2$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$\frac{-2}{1} = \frac{-3 - k}{k - 2}$

$1(-3 - k) = -2(k - 2)$

$-3 - 1k = -2k + 4 + 3$

$-1k = -2k + 7$

$+2k - 1k = 7$

$k = 7$

$k = \#$

**K**

A line passes through the points  $(2k, 11)$  and  $(k, k+3)$ .  
 If the slope is ~~3/5~~  $\frac{3}{5}$ , what is the value of  $k$ ?



1st  $x_1, y_1$  and  $x_2, y_2$   
 $(2k, 11)$   $(k, k+3)$

$$m = \frac{3}{5}$$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{3}{5} = \frac{(k+3) - 11}{1k - 2k}$$

$$\frac{3}{5} = \frac{k+3-11}{-1k}$$

$$\frac{3}{5} = \frac{k-8}{-1k}$$

$$5(k-8) = -3k$$

$$5k - 40 = -3k$$

$$5k + 3k = 40$$

$$8k = 40$$

$$\frac{8k}{8} = \frac{40}{8}$$

$$k = 5$$





