1

Real Life Situations!

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

$\frac{-16}{11} = \frac{-4-(-20)}{-14-k}$

$-16(-14-k) = 11(-4-(-20))$

$+224+16k = 11(-4+20)$

$+224+16k = 11(16)$

$-224+224+16k = 176-224$

$\frac{16k}{16} = \frac{-48}{16} \Rightarrow k = -3$

$m = \frac{-16}{11}$

x_1, y_1

$P1(k, -20)$

x_2, y_2

$P2(-14, -4)$

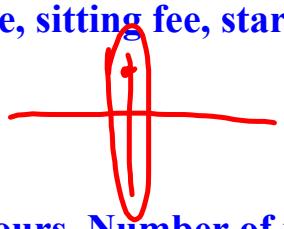
$P1(-3, -20)$

$P2(-14, -4)$

$y = mx + b$

Slope (m) = Cost per hour, Cost per Km, Cost per picture, etc..... (relationship)

y-intercept (b)= Initial cost, base rate, initial fee, flat rate, sitting fee, starting cost etc.....

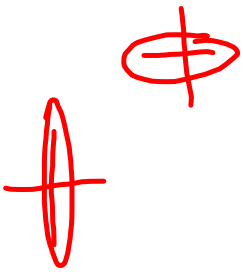


(independent)

x = Number of kilometers, Number of hours, Number of pictures, etc....

(dependent)

y = Total Cost $$$$, Total Earned $$$



2

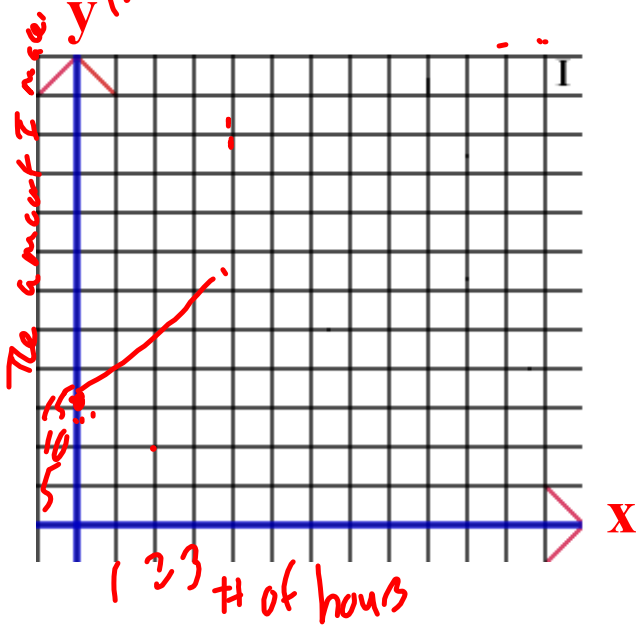
Laura babysits on the weekend to make extra money. She charges $15 as a flat rate and then $5 every hour.

3

Laura babysists on the weekend to make extra money. She charges $15 as a flat rate and then $5 every hour.

$y = mx + b$ ← y intercept. $b = 15$ $m = 5$

Graph



$y = 5x + 15$

$y = 5(3) + 15$
$y = 15 + 15$
$y = 30$

Equation

Laura babysits on the weekend to make extra money. She charges $15 as a flat rate and then $5 every hour.

b = 15
m = 5
x = # of hours
y = Total Cost $$

1. **How much would it cost to have Ashley babysit for 3 hours?**

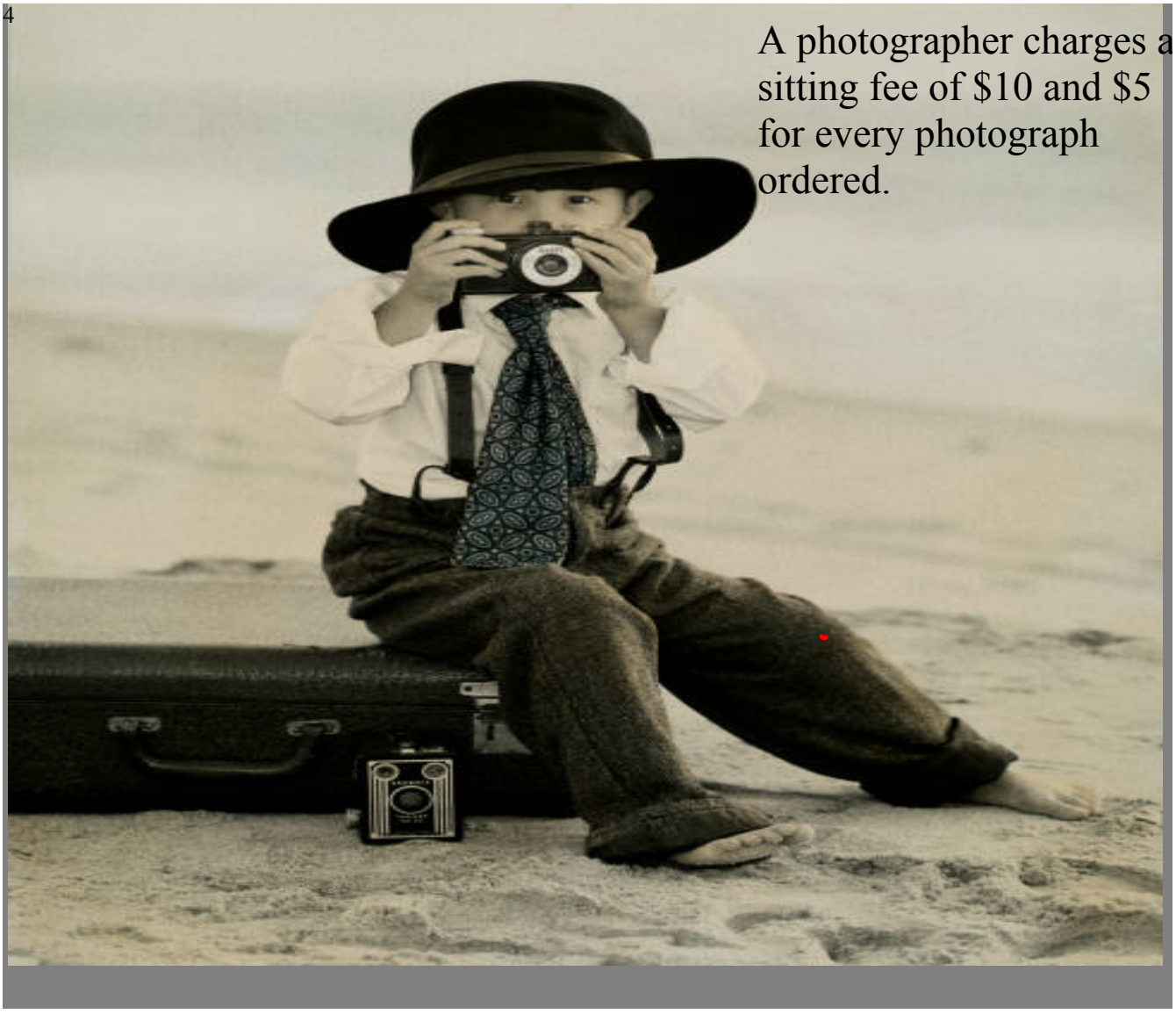
$y = 5x + 15$
$y = 5(3) + 15$
$y = 15 + 15$
$y = 30$

In 3 hours she made $30.

2. **How many hours could you ahve Ashley babysit for if you had $45?**

$y = mx + b$
$45 = 5x + 15 - 15$
$30 = \frac{5x}{5}$
$6 = x$

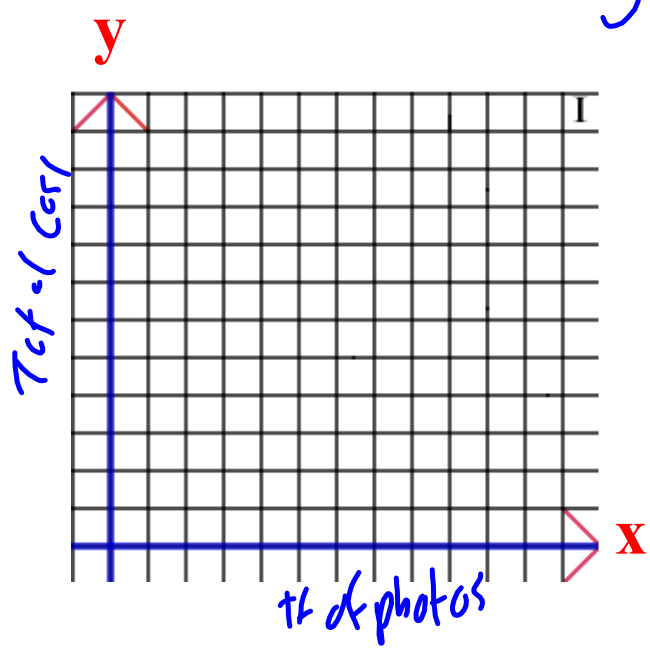
4


A photographer charges a sitting fee of $10 and $5 for every photograph ordered.

5

A photographer charges a sitting fee of $10 and $5 for every photograph ordered.

Graph



Equation

y-intercept.

b = $10

m = $5

x = # of photos ordered.

y = total cost.

y = 5x + 10

A photographer charges a sitting fee of $10 and $5 for every photograph ordered.

b = 10
m = 5
x = # of pictures
y = Total Cost $$

1. How many photographs could you get for $35?

$y = 5x + 10$
$35 = 5x + 10$
$-10 \quad -10$
$\frac{25}{5} = \frac{5x}{5}$
$x = 5$

for $35 I get 5 photos.

2. How much would it cost for 8 photographs?

8 ← x

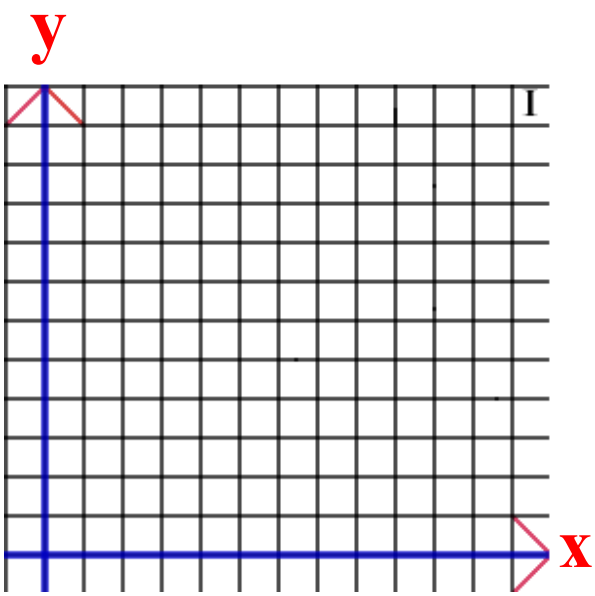
$y = 5x + 10$
$y = 5(8) + 10$
$y = 40 + 10$
$y = 50$.

6

A taxi driver charges a flat fee of $25 and then $1 for every km travele

7 **A taxi driver charges a flat fee of $25 and then $1 for every km traveled.**

Graph



Equation

b =
m =
x =
y =

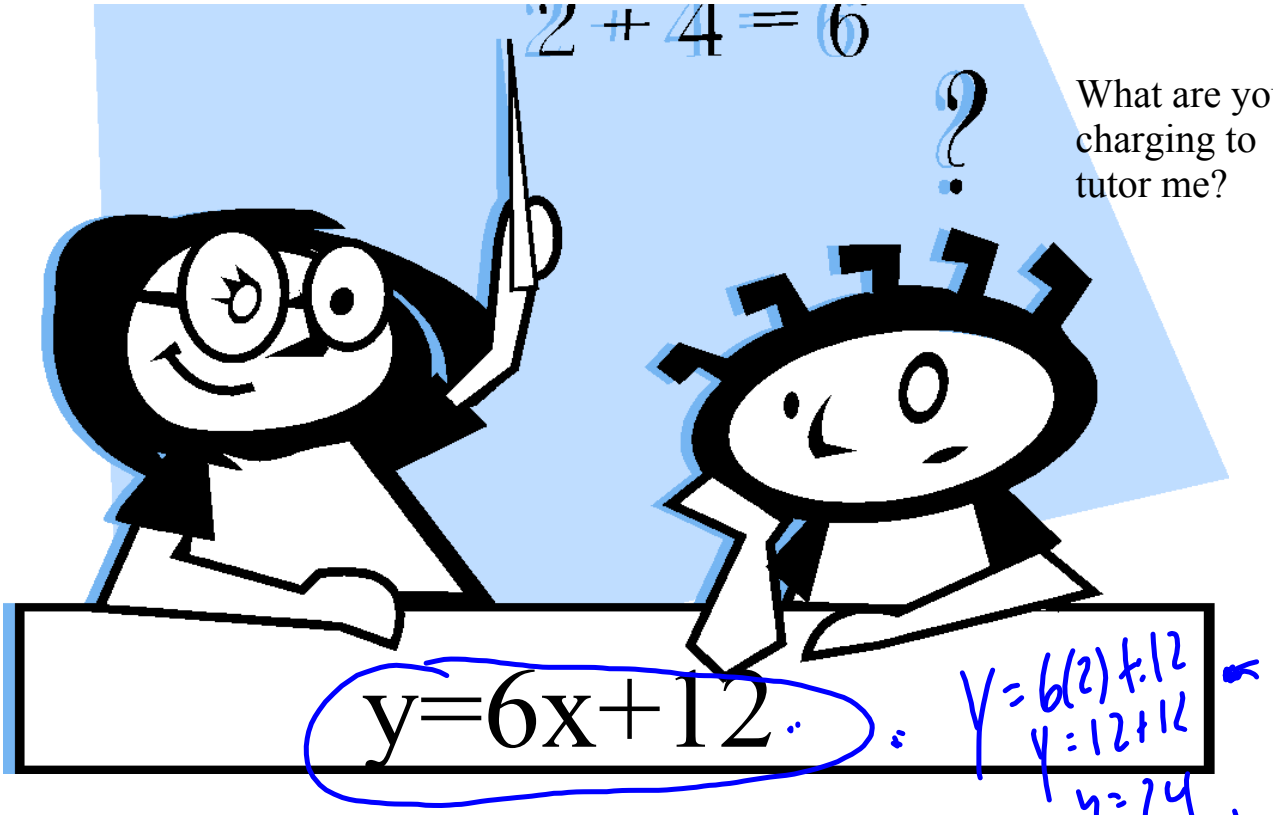
A taxi driver charges a flat fee of $25 and then $1 for every km traveled.

b = 25
m = 1
x = # of kilometers
y = Total Cost

1. How far can you travel for $75?

2. How much would it cost to travel 50 km?

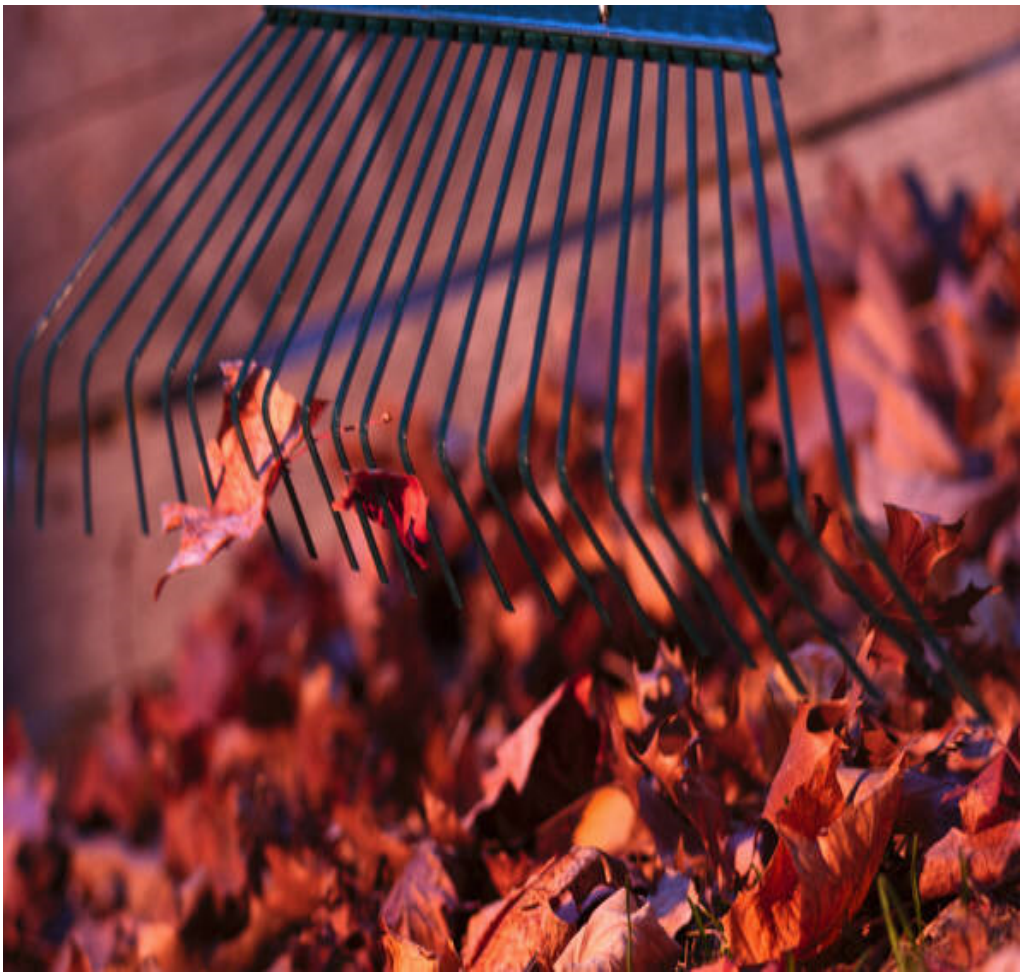
8



Write the scenario that would represent the equation.

9

Which of the following equations is a reasonable representation of the cost of raking leaves.



Total cost, # of hours

$y=20x+5$

$y=5x+20$

#1 $-\frac{1}{2}$ $y = \frac{2}{1}x + 3$ Homework

#2 = $y = mx + b$

$-5/4x$ $-\frac{5}{4}x$ → opposite sign → Reciprocal

#3

#4 ——— (horizontal) $y = -\frac{5}{4}x + 1$

#5 $m = \frac{y_2 - y_1}{x_2 - x_1}$