

Review For Test.

$$\begin{aligned} 1. \quad m &= \frac{y_2 - y_1}{x_2 - x_1} \\ &= \frac{-7 - (-7)}{-2 - 5} \\ &= \frac{-7 + 7}{-2 - 5} \\ &= \frac{0}{-7} \\ &= 0 \end{aligned}$$

$$2. \quad \begin{matrix} (6, -1) \\ (11, K) \end{matrix}$$

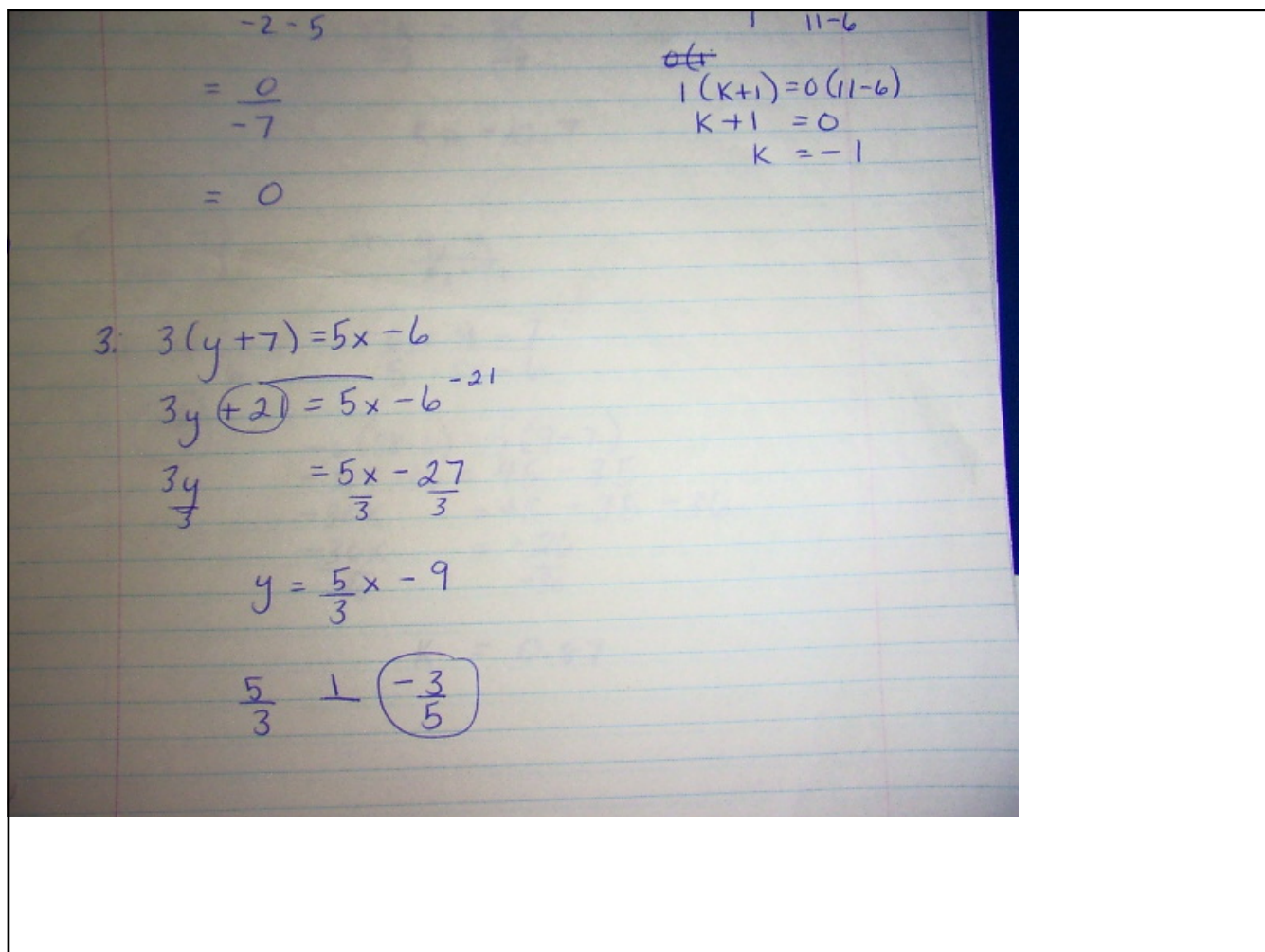
Parallel
x-axis
 $\frac{0}{1}$

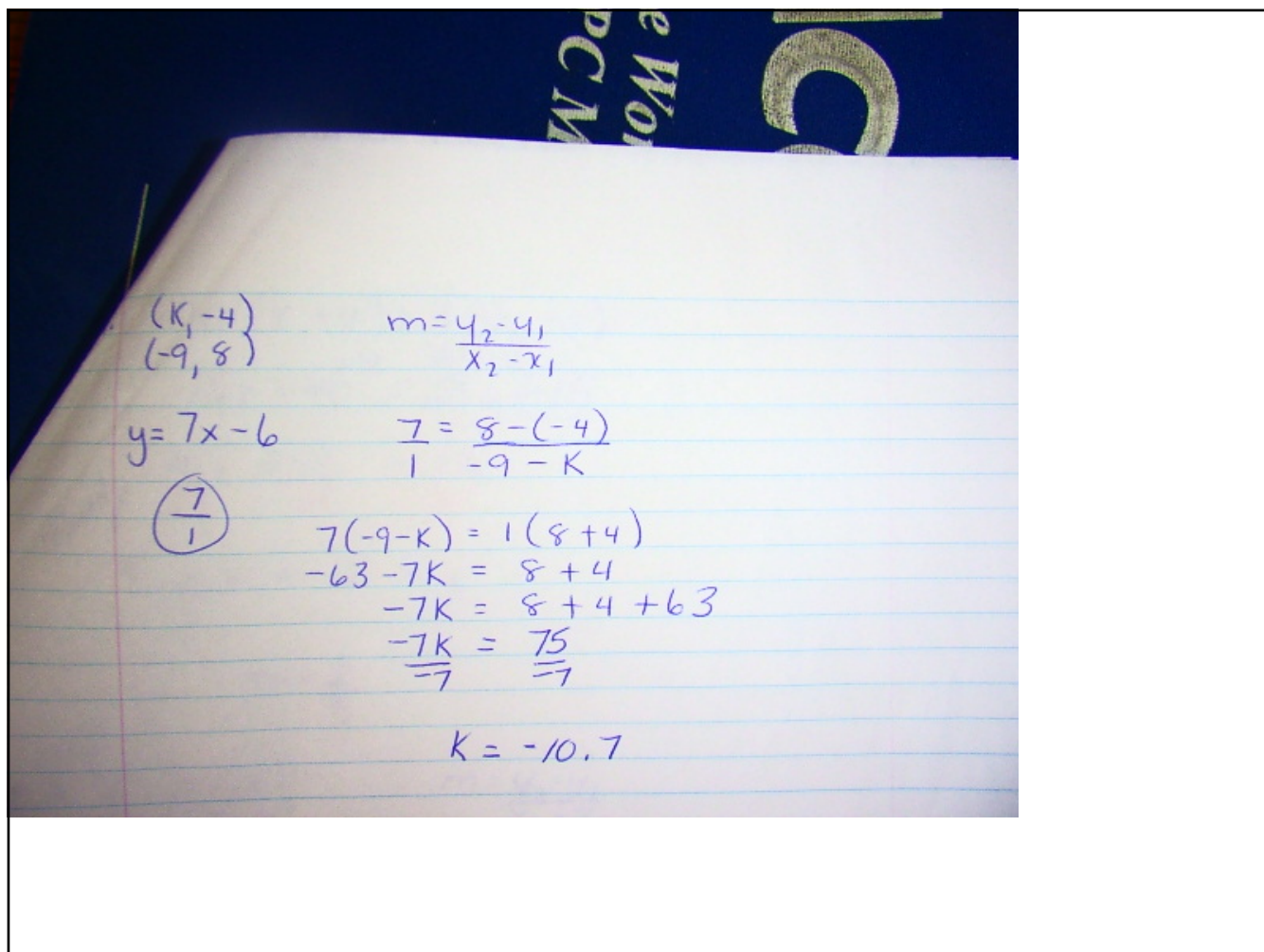
$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{0}{1} = \frac{K - (-1)}{11 - 6}$$

$$\frac{0}{1} = \frac{K + 1}{11 - 6}$$

$$\begin{aligned} 0 &= K + 1 \\ K + 1 &= 0 \\ K &= -1 \end{aligned}$$





Handwritten work on lined paper showing the process of finding the value of k for a line passing through two points.

Points: $(k, -4)$ and $(-9, 8)$

Equation: $y = 7x - 6$

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

Substituting values: $7 = \frac{8 - (-4)}{1 - 9 - k}$

Step-by-step solution:

$$\begin{aligned} 7(-9 - k) &= 1(8 + 4) \\ -63 - 7k &= 8 + 4 \\ -7k &= 8 + 4 + 63 \\ -7k &= 75 \\ \Rightarrow & \Rightarrow \\ k &= -10.7 \end{aligned}$$

$$5. \begin{pmatrix} 6, 7 \\ 5k, 9 \end{pmatrix}$$

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

$$L \text{ to } \frac{5}{6}$$

$$\frac{-6}{5} = \frac{9-7}{5k-6}$$

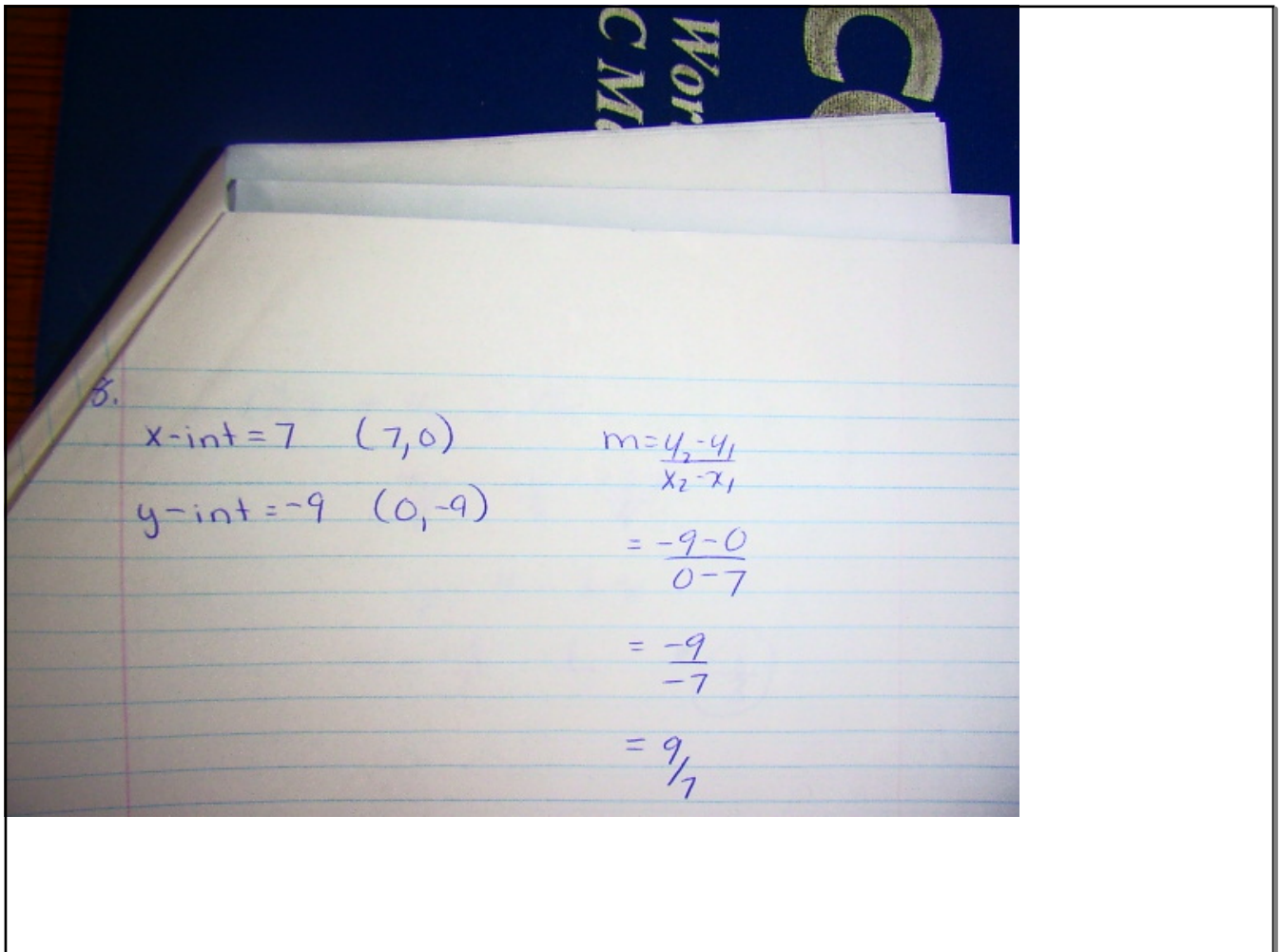
$$\left(\frac{-6}{5}\right)$$

$$\begin{aligned} -6(5k-6) &= 5(9-7) \\ -30k+36 &= 45-35 \\ -30k &= 45-35-36 \\ \underline{-30k} &= \underline{-26} \\ -30 & \quad -30 \end{aligned}$$

$$k = 0.87$$

The image shows a piece of lined paper with handwritten algebraic work. The work starts with the equation $10(x+4) = 5(5y-2)$. The next line shows $10x + 40 = 25y - 10$, with a '+10' written above the 40 and a '-10' circled below the 25y. The third line shows $\frac{10x}{25} + \frac{50}{25} = \frac{25y}{25}$, with the 25s written in red. A curved arrow labeled 'reduced' points from this line to the next, which is $\frac{2}{5}x + 2 = y$. Below this, the slope is given as $m = \frac{2}{5}$.

$$10(x+4) = 5(5y-2)$$
$$10x + 40 = 25y - 10$$
$$\frac{10x}{25} + \frac{50}{25} = \frac{25y}{25}$$
$$\frac{2}{5}x + 2 = y$$
$$m = \frac{2}{5}$$



$$9. \begin{matrix} (3, 5k) \\ (-8k, 6) \end{matrix}$$

$$y = \frac{6}{3}x + 11$$

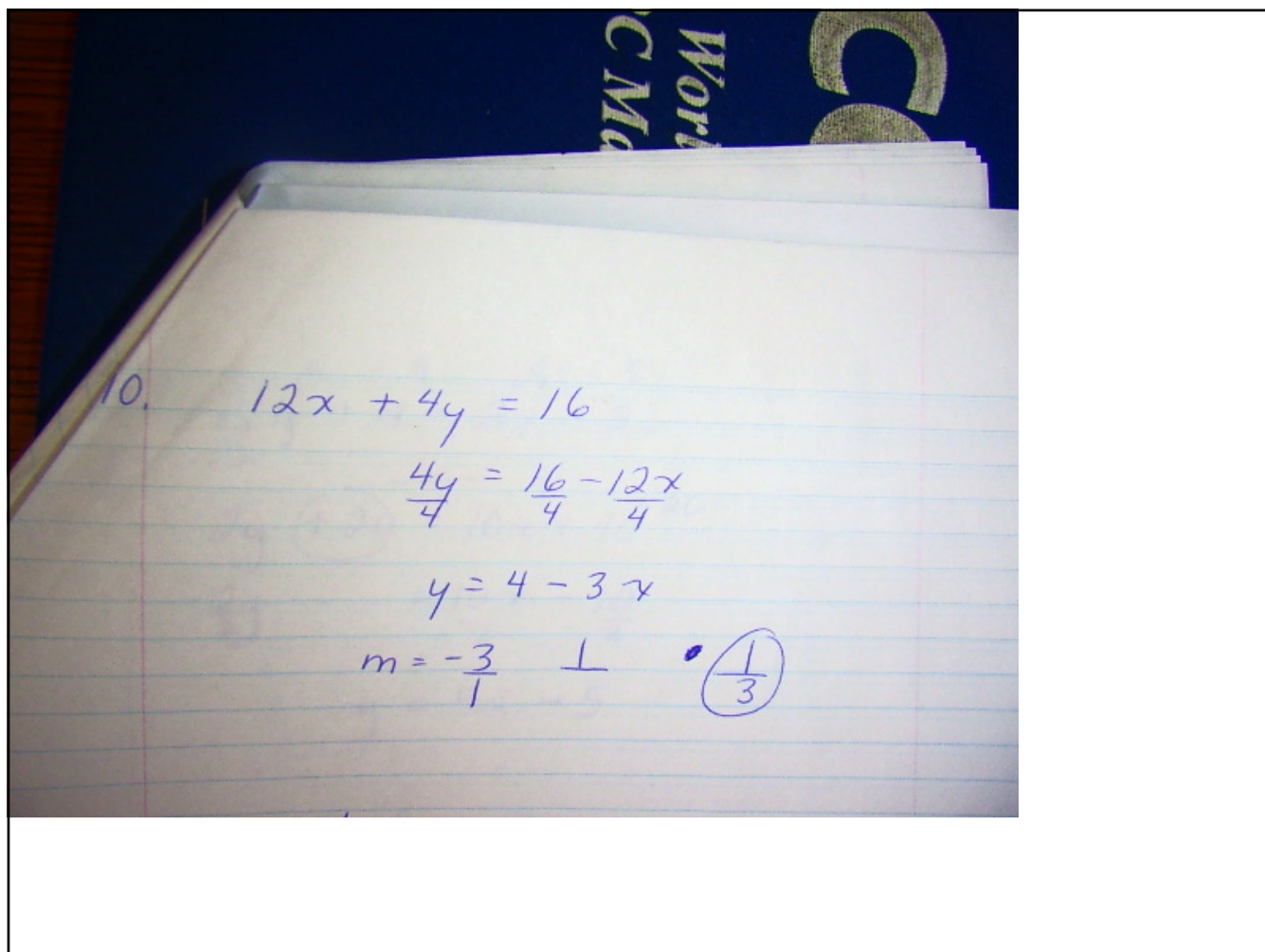
$$\frac{6}{3} \perp = -\frac{3}{6}$$

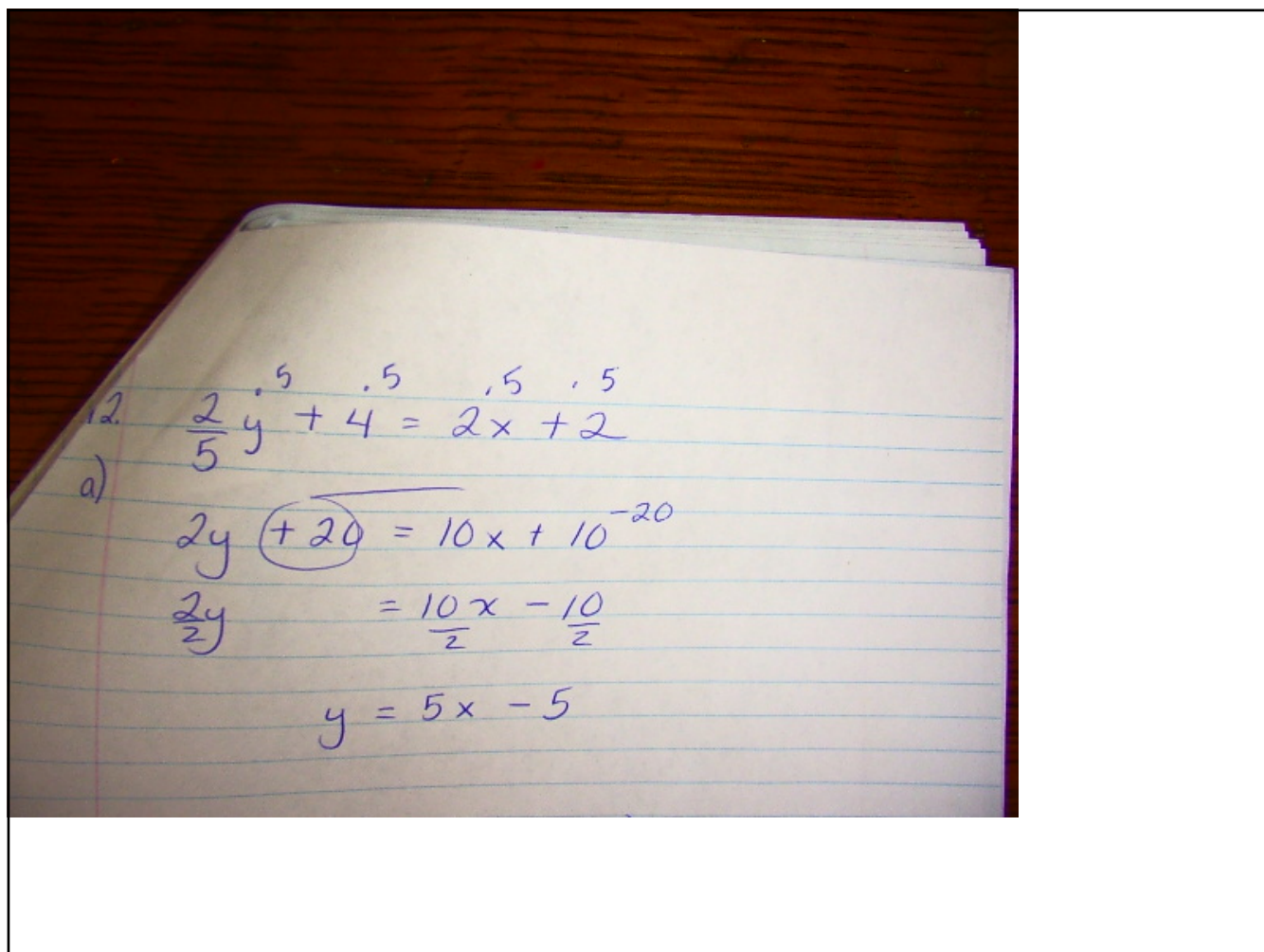
$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$-\frac{3}{6} = \frac{6 - 5k}{-8k - 3}$$

$$\begin{aligned} -3(-8k - 3) &= 6(6 - 5k) \\ 24k + 9 &= 36 - 30k \\ 24k + 30k &= 36 - 9 \\ \frac{54k}{54} &= \frac{27}{54} \end{aligned}$$

$$k = 0.5$$





12. $\frac{2}{5}y + 4 = 2x + 2$

a)

$$2y + 20 = 10x + 10^{-20}$$
$$\frac{2y}{2} = \frac{10x}{2} - \frac{10}{2}$$
$$y = 5x - 5$$

$$\begin{aligned}
 \text{b) } 6(2y+1) &= 2(7x-9) \\
 12y + 6 &= 14x - 18 - 6 \\
 \frac{12y}{12} &= \frac{14x}{12} - \frac{24}{12} \\
 &\quad \text{reduced} \\
 y &= \frac{7x}{6} - 2
 \end{aligned}$$

$$13. \text{ a) } y = 9x + 25 \quad \left\{ \text{ b) } y = \bar{x} \right.$$

$$\text{b) } y = 9x + 25$$

$$y = 9(8) + 25$$

$$= 72 + 25$$

$$= 97$$

$$\text{c) } y = 9x + 25$$

$$110 = 9x + 25$$

$$\frac{85}{9} = \frac{9x}{9}$$

$$9.4 = x$$

9 charms