

② Plan A:  $y = 10x + 0$   
 Plan B:  $y = 8x + 8$   
 \* Plan C:  $y = 40$

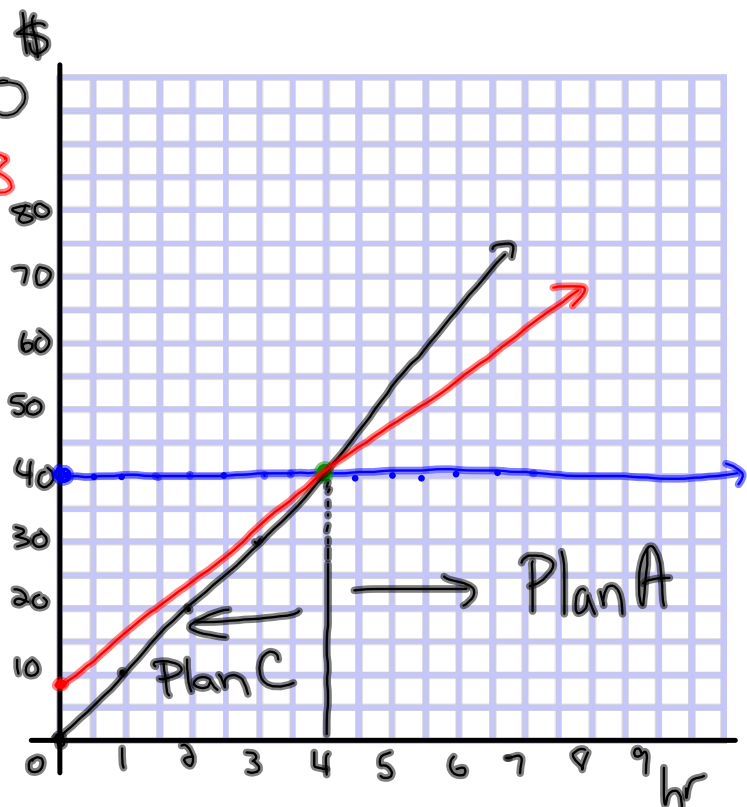
Comparison:

$$10x = 8x + 8$$

$$2x = 8$$

$$x = 4 \text{ hrs}$$

$$y = 10(4) = \$40$$



$$\textcircled{3} a) \quad 4x + 2y = 6$$

$$y = x - 6$$

Substitution:

$$4x + 2(x - 6) = 6$$

$$4x + 2x - 12 = 6$$

$$6x = 18$$

$$x = 3$$

$$y = (3) - 6 \quad (3, -3)$$

$$y = -3$$

Elimination:

$$4x + 2y = 6$$

$$y = x - 6$$

$$4x + 2y = 6$$

$$-x + y = -6$$

$$\begin{array}{r} (+) 4x + 2y = 6 \\ 2x - 2y = 12 \\ \hline 6x = 18 \end{array}$$

$$6x = 18$$

$$x = 3$$

$$y = 3 - 6$$

$$y = -3$$

Comparison:

$$4x + 2y = 6 \rightarrow 2y = -4x + 6 \rightarrow y = -2x + 3$$

$$y = x - 6$$

$$x - 6 = -2x + 3$$

$$y = 3 - 6 \quad (3, -3)$$

$$y = -3$$

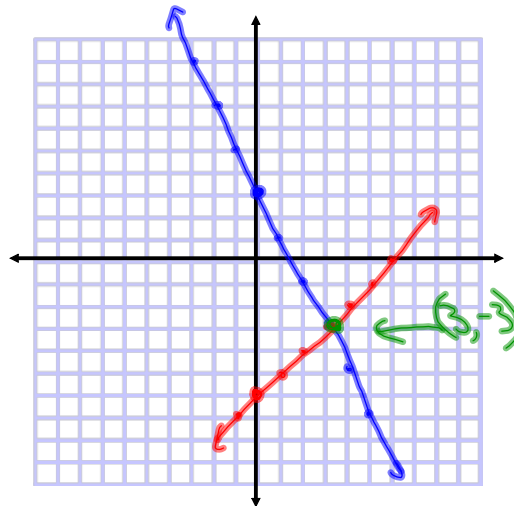
$$3x = 9$$

$$x = 3$$

Graphing:

$$y = -2x + 3 \quad m = -\frac{2}{1} \quad b = 3$$

$$y = x - 6 \quad m = \frac{1}{1} \quad b = -6$$



$$\textcircled{4} \text{ a) } \overset{\partial}{\frac{x}{\partial}} + \overset{\partial}{\frac{5y}{\partial}} = 11$$

$$x + 5y = 22$$

$$\textcircled{x} \frac{(x+5)}{6} + \frac{(y-3)}{3} = 1$$

$$x+5+2y-6=6$$

$$x+2y=7$$

$$\frac{6x+30}{6} + \frac{6y-18}{3} = 6$$

$$x+5+2y-6=6$$

$$\Leftrightarrow \begin{array}{l} x+5y=22 \\ x+2y=7 \end{array}$$

$$\hline 3y=15$$

$$y=5$$

$$x+2(5)=7$$

$$x+10=7$$

$$x=-3$$

$$x=-3$$

$$(-3, 5)$$