11. $3x + 2y = 7 \Rightarrow 2y = -3x + 7$

$$y = -1.5x + 3.5$$

Compare with $y = mx + b$:

$m = -1.5$, $b = 3.5$, x-intercept obtained by setting

$$y = 0:$$

$$0 = -1.5x_0 + 3.5$$

$$1.5x_0 = 3.5 \Rightarrow x_0 = \frac{3.5}{1.5} = \boxed{2.33}$$

12. $(x_1, y_1) = (-1, 6)$ and $(x_2, y_2) = (2, -9)$

$m = \text{slope} = \dfrac{y_2 - y_1}{x_2 - x_1} = \dfrac{-9 - 6}{2 - (-1)} = -\dfrac{15}{3} = \boxed{-5}$

$y = mx + b \Rightarrow b = y_1 - mx_1 = 6 - (-5)(-1) = \boxed{1}$

$y = -5x + 1$ so when $y = 0$, $x = \dfrac{1}{5} = \boxed{0.2}$

13. (a) $\sum \angle = 180°$

$\theta + 30° + 90° = 180°$

$\theta = 180° - 90° - 30° = \boxed{60°}$

(b) $\theta + 20° + 75° = 180°$

$\theta = 180° - 75° - 20°$

$\boxed{\theta = 85°}$

(c)



$37° + \phi = 90°$

and $\phi + \theta = 90°$

$\therefore \boxed{\theta = 37°}$
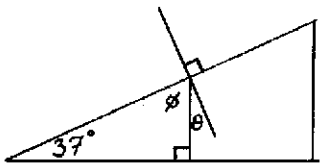
14.
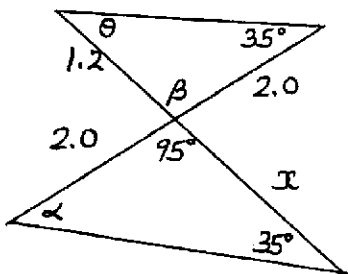


$\beta = 95°$ (opposite angles)

$\alpha + 95° + 35° = 180° \Rightarrow \alpha = 50°$

$\theta + \beta + 35° = 180°$

$\theta + 95° + 35° = 180° \Rightarrow \theta = 50°$

$\triangle$'s are similar since they have equal angles, so ratios of corresponding sides are equal:

$\dfrac{1.2}{2.0} = \dfrac{2.0}{x} \Rightarrow 1.2x = 4.0 \Rightarrow \boxed{x = 3.33}$