

37 (a) $-2x + y = 0 \Rightarrow y = 2x$ and $7x - 2y = 3 \Rightarrow 7x - 3 = 2y \Rightarrow y = \frac{7x-3}{2}$

Graph $Y_1 = 2X$ and $Y_2 = (7X - 3)/2$. Their graphs intersect at the point (1, 2).

See *Figure 37a*.

(b) Table $Y_1 = 2X$ and $Y_2 = (7X - 3)/2$ starting at 0 and incrementing by 0.5.

See *Figure 37b*. Here $Y_1 = Y_2 = 2$ when $x = 1$. The solution is (1, 2).

(c) Substituting $y = 2x$ into the second equation gives

$$7x - 2(2x) = 3 \Rightarrow 3x = 3 \Rightarrow x = 1.$$

If $x = 1$, then $y = 2(1) = 2$. The solution is (1, 2).

$[-10, 10, 1]$ by $[-10, 10, 1]$

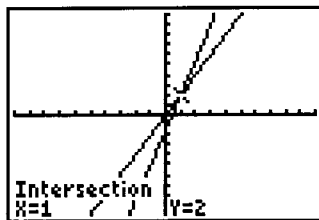


Figure 37a

| X | Y ₁ | Y ₂ |
|------------|----------------|----------------|
| 0 | 0 | -1.5 |
| 0.5 | 1 | -0.25 |
| 1 | 2 | 2 |
| 1.5 | 3 | 3.75 |
| 2 | 4 | 5.5 |
| 2.5 | 5 | 7.25 |
| 3 | 6 | 9 |
| X=1 | | |

Figure 37b