

Questions

1. Sketch $y = -2x + 1$. Find the value of y when $x = 0$, $x = -2$, and $x = 1$.
2. Sketch $y = 2x - 5$. Find the value of y when $x = 0$, $x = 2$, and $x = 4$.
3. Sketch $y = 3x + 2$. Find the value of y when $x = -1$, $x = 0$, and $x = 1$.
4. Sketch $4x + 3y = 12$.
5. Sketch $3x + 2y = 6$.
6. Sketch $y = 6 - 2x$.
7. Sketch $x - 6 = 2y$.
8. Sketch $y - 2 = 3y$.
9. Sketch $2x + 9 = 5x$.
10. Sketch $2x + 5y - 2 = -12$.

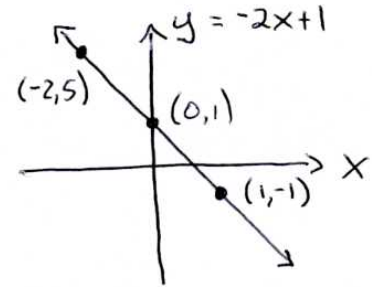
Solutions

1. $y = -2x + 1$

When $x = 0 \Rightarrow y = -2(0) + 1 = 1$, so the ordered pair is $(0, 1)$.

When $x = -2 \Rightarrow y = -2(-2) + 1 = 5$, so the ordered pair is $(-2, 5)$.

When $x = 1 \Rightarrow y = -2(1) + 1 = -1$, so the ordered pair is $(1, -1)$.

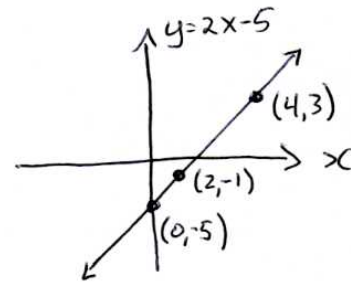


2. $y = 2x - 5$

When $x = 0 \Rightarrow y = 2(0) - 5 = -5$, so the ordered pair is $(0, -5)$.

When $x = 2 \Rightarrow y = 2(2) - 5 = -1$, so the ordered pair is $(2, -1)$.

When $x = 4 \Rightarrow y = 2(4) - 5 = 3$, so the ordered pair is $(4, 3)$.

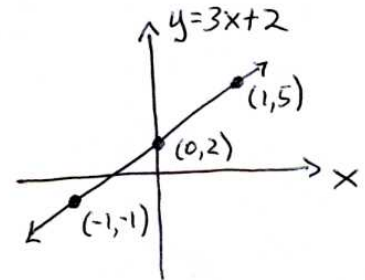


3. $y = 3x + 2$

When $x = -1 \Rightarrow y = 3(-1) + 2 = -1$, so the ordered pair is $(-1, -1)$.

When $x = 0 \Rightarrow y = 3(0) + 2 = 2$, so the ordered pair is $(0, 2)$.

When $x = 1 \Rightarrow y = 3(1) + 2 = 5$, so the ordered pair is $(1, 5)$.

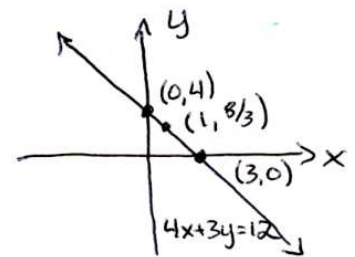


4. $4x + 3y = 12$

When $x = 0 \Rightarrow 4(0) + 3y = 12 \Rightarrow y = 4$ so the ordered pair is $(0, 4)$.

When $y = 0 \Rightarrow 4x + 3(0) = 12 \Rightarrow x = 3$ so the ordered pair is $(3, 0)$.

When $x = 1 \Rightarrow 4(1) + 3y = 12 \Rightarrow y = 8/3$ so the ordered pair is $(1, 8/3)$.

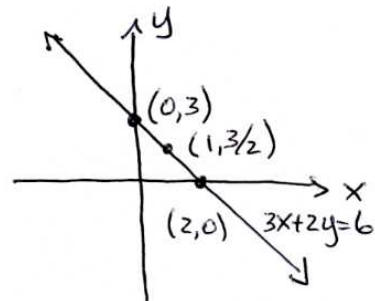


5. $3x + 2y = 6$

When $x = 0 \Rightarrow 3(0) + 2y = 6 \Rightarrow y = 3$ so the ordered pair is $(0, 3)$.

When $y = 0 \Rightarrow 3x + 2(0) = 6 \Rightarrow x = 2$ so the ordered pair is $(2, 0)$.

When $x = 1 \Rightarrow 3(1) + 2y = 6 \Rightarrow y = 3/2$ so the ordered pair is $(1, 3/2)$.

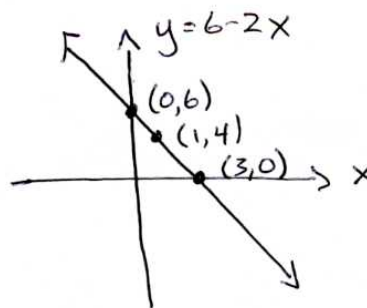


6. $y = 6 - 2x$

When $x = 0 \Rightarrow y = 6 - 2(0) \Rightarrow y = 6$ so the ordered pair is $(0, 6)$.

When $y = 0 \Rightarrow 0 = 6 - 2x \Rightarrow x = 3$ so the ordered pair is $(3, 0)$.

When $x = 1 \Rightarrow y = 6 - 2(1) \Rightarrow y = 4$ so the ordered pair is $(1, 4)$.

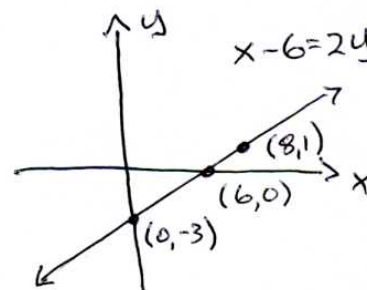


7. $x - 6 = 2y$

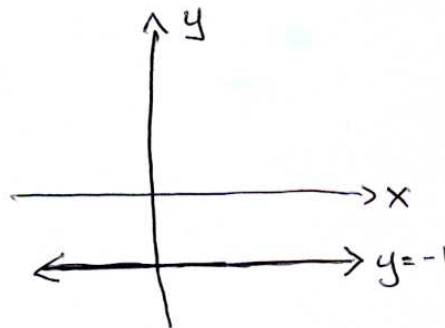
When $x = 0 \Rightarrow (0) - 6 = 2y \Rightarrow y = -3$ so the ordered pair is $(0, -3)$.

When $y = 0 \Rightarrow x - 6 = 2(0) \Rightarrow x = 6$ so the ordered pair is $(6, 0)$.

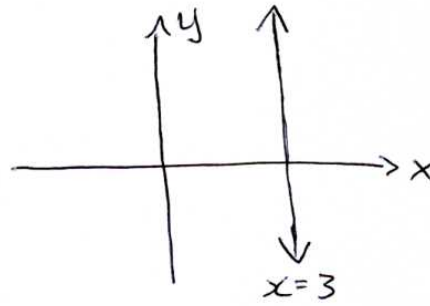
When $x = 8 \Rightarrow (8) - 6 = 2y \Rightarrow y = 1$ so the ordered pair is $(8, 1)$.



8. $y - 2 = 3y$. There is no x in the equation. Simplification shows this is a horizontal line, $y = -1$.



9. $2x + 9 = 5x$. There is no y in the equation. Simplification shows this is a vertical line, $x = 3$.



10. $2x + 5y - 2 = -12 \Rightarrow 2x + 5y = -10$

When $x = 0 \Rightarrow 2(0) + 5y = -10 \Rightarrow y = -2$ so the ordered pair is $(0, -2)$.

When $y = 0 \Rightarrow 2x + 5(0) = -10 \Rightarrow x = -5$ so the ordered pair is $(-5, 0)$.

When $x = 5 \Rightarrow 2(5) + 5y = -10 \Rightarrow y = -4$ so the ordered pair is $(5, -4)$.

