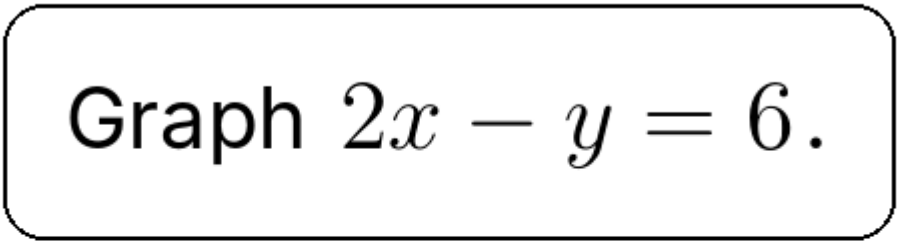
Every Solution Is a Point

GL04-V1 · storyboard · GL04 Graph a linear equation. Read each picture with its sentences.

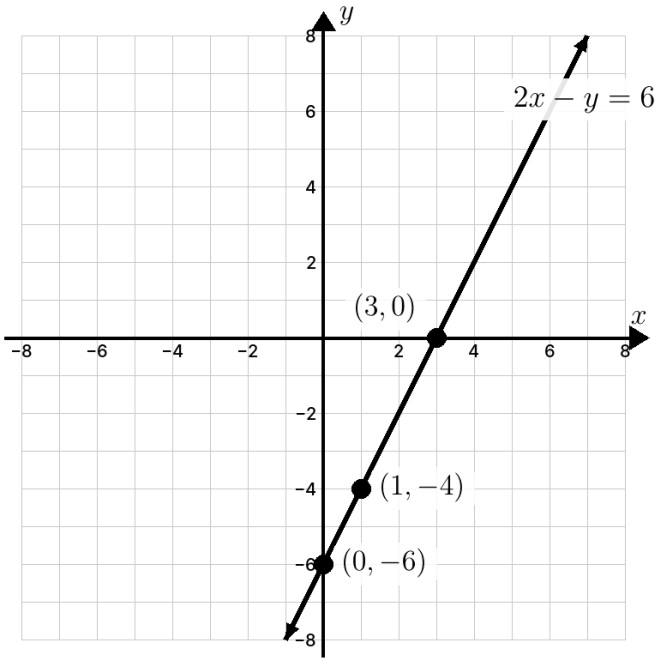
Picture 1



$y = 2x - 6$ solve for y

1. Graph 2 x minus y equals 6.
2. First solve for y: y equals 2 x minus 6.

Picture 2



$x = 0$: $y = -6$

$x = 1$: $y = -4$

$x = 3$: $y = 0$

3. A table: when x is 0, y is negative 6.
4. When x is 1, y is negative 4.
5. When x is 3, y is 0.
6. The three points lie on a straight line: draw it, with arrows, because it goes on for ever.

Picture 3

Trap $2x - y = 6$

$\times \quad y = 2x + 6$

$\checkmark \quad y = 2x - 6$

7. Watch for the trap: a sign slip when you solve for y.
8. Check a point in the original equation: 0, negative 6 gives 0 plus 6, which is 6.

Picture 4

Is $(6, -1)$ on the line $x - 2y = 8$?

$6 - 2(-1) = 6 + 2 = 8$ yes: it is on the line

9. Is the point 6, negative 1 on the line x minus 2 y equals 8?
10. Put it in: x is 6 and y is negative 1.
11. 6 minus 2 times negative 1 is 8.
12. Yes, it is on the line.