

Rise & Run/ $y = mx + b$ practiceex. #1 Solve for y ($y = mx + b$).

$$5x + y = -8$$

Here we need to get rid of $5x$ to get y alone on one side of the equal sign. Since it is in front, we

$$y = -8 - 5x$$

subtract $5x$. Now we need it in the order $y = mx + b$.

$$y = -5x - 8$$

Make sure you move the sign (- or +) with the number.

$$m = -5$$

$$b = -8$$

1. $3x + y = 5$

- 1) Solve for y
- 2) State m and b.

2. $7x + 2y = 6$

- 1) Solve for y
- 2) State m and b.

ex. #2 Solve for y.

$$5x + 2y = -8$$

Subtract $5x$ as we did in the last problem.

$$2y = -8 - 5x$$

Put the equation in the form of $y = mx + b$

$$2y = -5x - 8$$

To get y by itself, get rid of the 2.

$$\frac{2y}{2} = \frac{-5x}{2} - \frac{8}{2}$$

Do the opposite of multiplying by 2, which is divide by 2.

$$y = -\frac{5}{2}x - 4$$

$$m = -\frac{5}{2}; b = -4$$

3. $3x + 4y = 20$

- 1) Solve for y
- 2) State m and b.

4. $-3x + 6y = -30$

- 1) Solve for y
- 2) State m and b.

ex. #3 Solve for y.

$-2x - 3y = 15$ Since $-2x$ is in front, subtract $-2x$ to get $-3y$ alone. (notice the minus sign remains in front of the $3y$)

$-3y = 15 - 2x$ Don't forget two minus signs change to a + sign.

$-3y = 15 + 2x$ Put the equation in the right order. ($y = mx + b$)

$-3y = 2x + 15$ Divide by -3 to get y alone. Simplify. Remember that adding -5 is the

$\frac{-3y}{-3} = \frac{2x}{-3} + \frac{15}{-3}$ same as subtracting $+5$.

$y = -\frac{2}{3}x - 5$ $m = -\frac{2}{3}$; $b = -5$

ex. #4 Solve for y.

$6x - y = 15$ Get rid of $6x$ to get y alone. Since $6x$ is in front, subtract it.

$-y = 15 - 6x$ Notice the negative sign stays with the y . Put the in the right order. ($y = mx + b$)

$-y = -6x + 15$ Remember that $-y$ is the same as $-1 \cdot y$ or $-1y$, so divide by -1 to get rid of the negative sign in front of y .

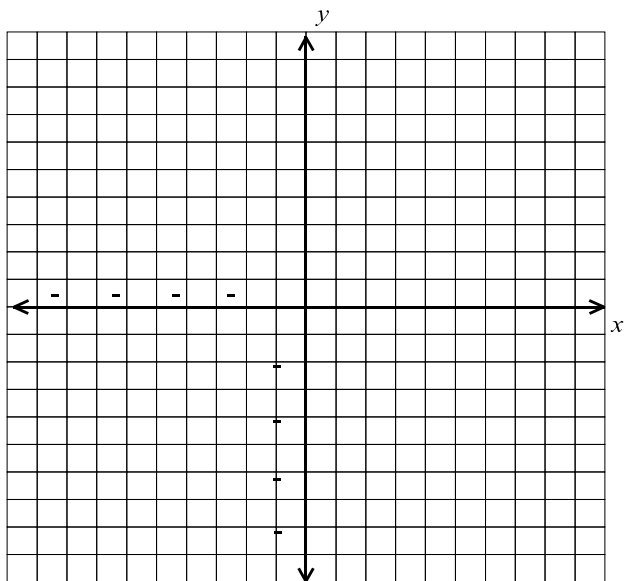
$y = 6x - 15$ $m = -6$; $b = 15$

5. $-4x - 2y = -14$ 1) Solve for y
2) State m and b.

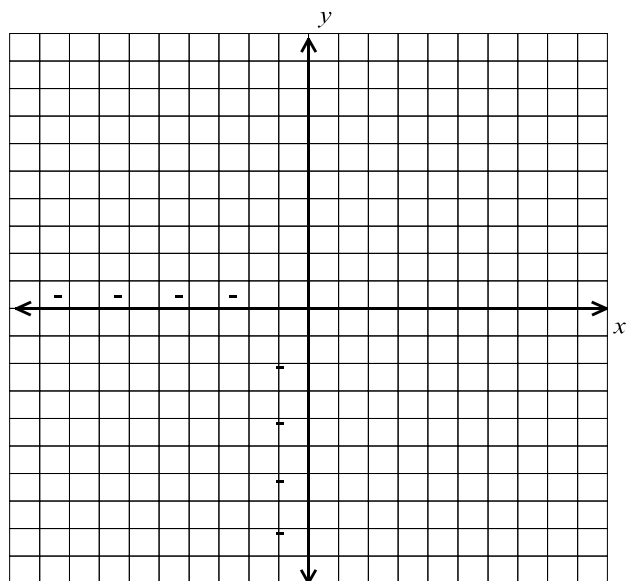
6. $6x + 2y = 8$ 1) Solve for y
2) State m and b.

7. $3x - y = 2$ 1) Solve for y
2) State m and b.

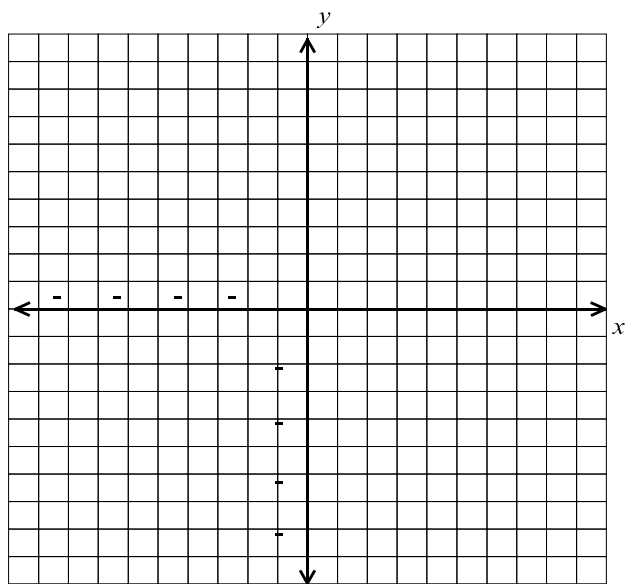
8. $-3x - 3y = -15$ 1) Solve for y
2) State m and b.



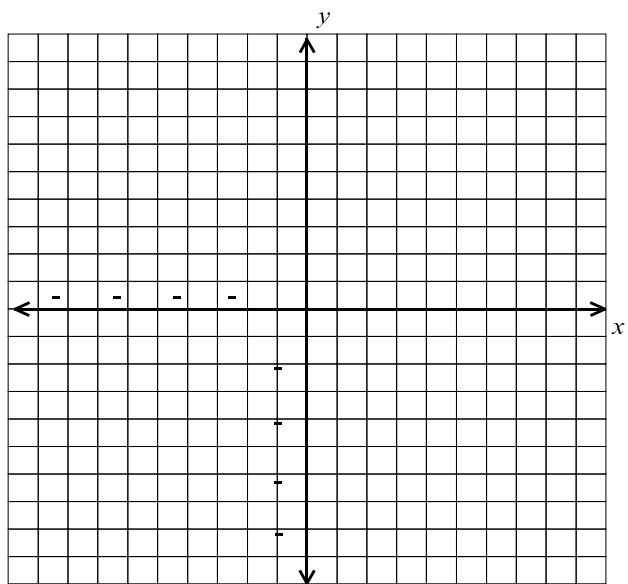
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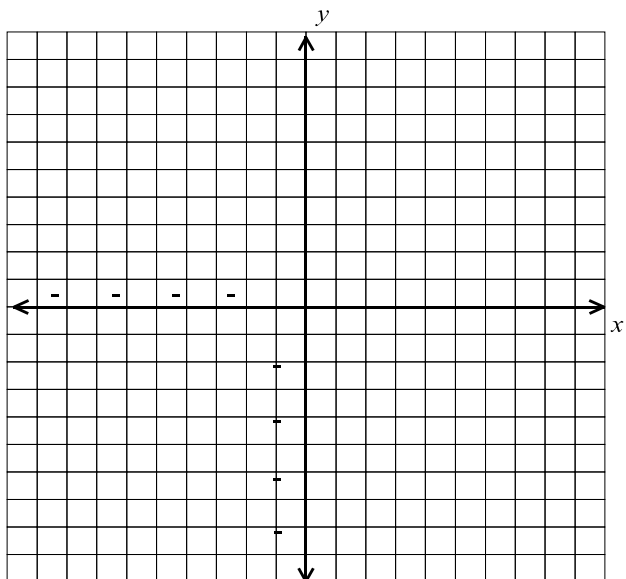
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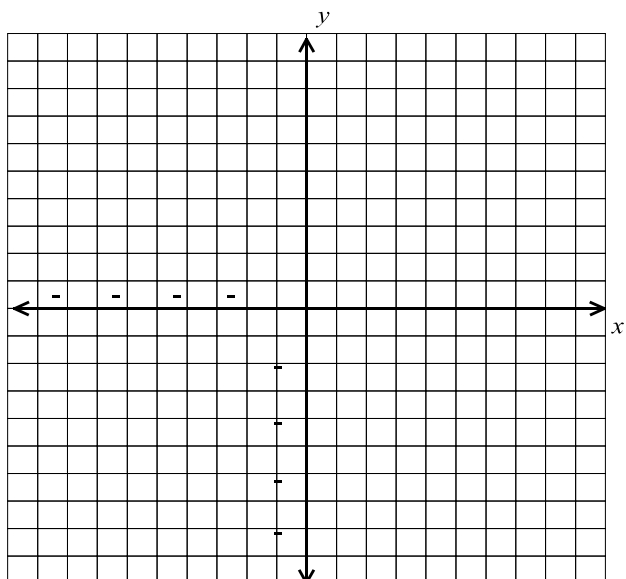
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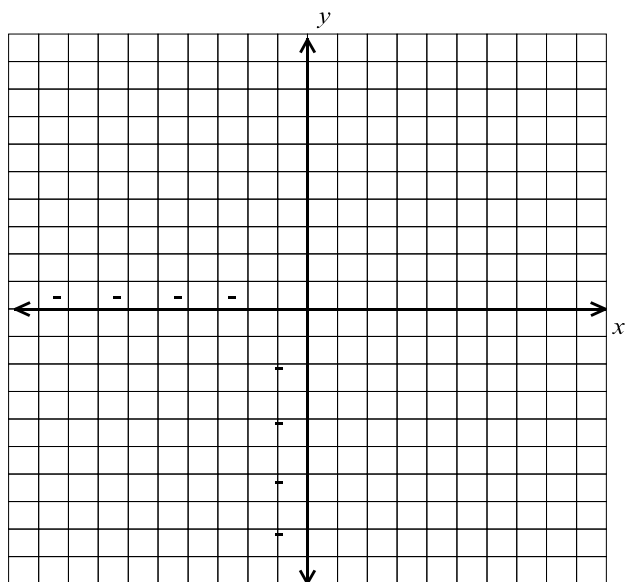
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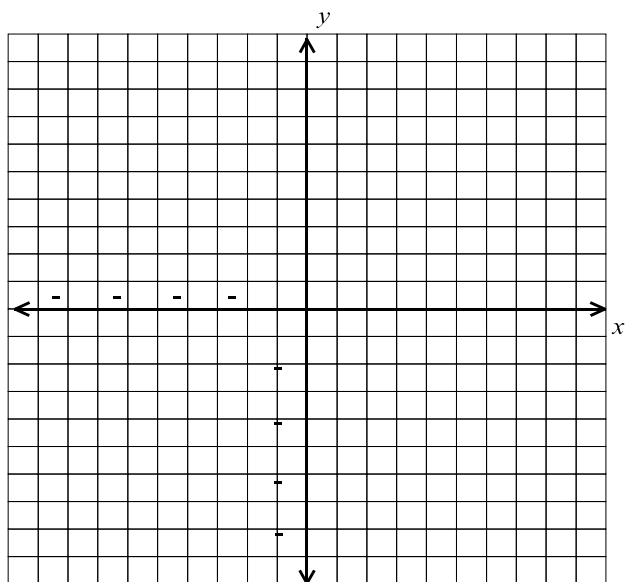
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