5.4

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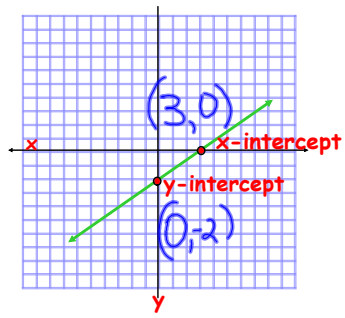
Graph Using Intercepts

An x-intercept of a graph is the x-coordinate of a point where the graph crosses the x-axis

An y-intercept of a graph is the y-coordinate of a point where the graph crosses the y-axis



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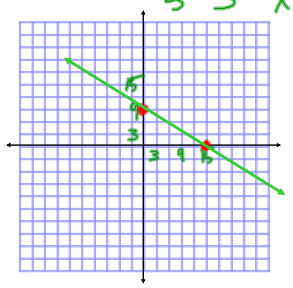
What are the x- and y-intercept of the graph of 3x + 5y = 45?

x	y
0	9
15	0

$\frac{5y}{5}=\frac{45}{5}$ $y=9$

$\frac{3x}{3}=\frac{45}{3}$ $x=15$



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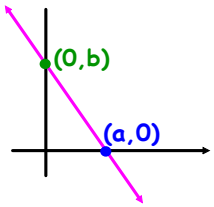

Key Concept

The x-intercept of a graph is a.
The graph crosses the x-axis at (a,0).

The y-intercept of a graph is b.
The graph crosses the y-axis at (0,b).

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Guided Practice

Find the x-intercept and the y-intercept of the graph of the equation.

1) 3x + 2y = 6

x	y
0	3
2	0

2) 4x - 2y = 10

$4x = 10$

3) -3x + 5y = -15

$-3x=-15$

x	y
0	-3
5	0

x	y
0	-5
2.5	0

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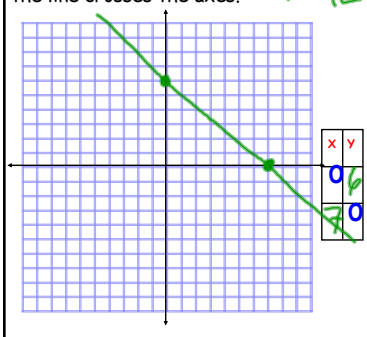
Guided Practice

4) Graph 6x + 7y = 42. Label the points where the line crosses the axes.

$7y=42$

$6x=42$



x	y
0	6
7	0

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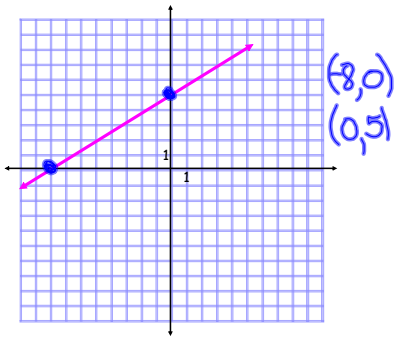
5) Identify the x-intercept and the y-intercept of the graph shown.



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Assignment WB 5.4; 7-24

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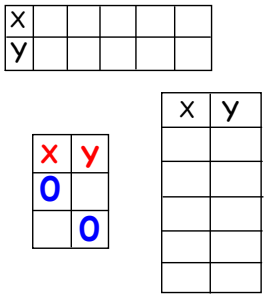

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