College Algebra 1

Section 5.5 – Standard Form

Starter(s):

1. Write an equation of a line in Point-Slope form that goes through point (-3,2) and has a slope of -5.
2. Write an equation of a line in Point-Slope form that goes through points (1,2) and (5,6). Then switch the equation to Slope-Intercept form.

Objective: To graph linear equations using intercepts and to write linear equations in standard form.



x-intercept:

y-intercept:

Problem 1: Finding the x- and y-intercepts

 What are the x- and y-intercepts of the graph of $3x+4y=24$?

Step 1: To find the x-intercepts, substitute 0 in for y. Solve for x.

Step 2: To find the y-intercepts, substitute 0 in for x. Solve for y.

Try it!

a) $5x-6y=60$

b) $3x+8y=12$

Problem 2: Graphing a Line Using Intercepts

 Try it!

What is the graph of $x-2y=-2$?

What is the graph of $2x+5y=20?$

 

Problem 3: Graphing Horizontal and Vertical Lines

 $x=3$ $y=2$

 

Problem 4: Transforming to Standard Form

* Given an equation in point-slope form or y-intercept form, you can rewrite the equation in Standard Form.

 What is $y=-2x+5$ written in standard form?

 What is $y=\frac{3}{7}x+2$ written in standard form?

 What is $y-2=-\frac{1}{3}(x+6)$ written in standard form?

You try!

Hw: 5.5 p. 326 #17-22, 27-38, 52, 60

1. What are the x- and y-intercepts of the graph of $3x-4y=9?$
2. What is the graph of $5x+4y=20?$



1. What is the graph of $y=-2$? What type of line is it?



1. What is $y=\frac{1}{2}x+3$ written in standard form?