

Section 2.3: Quick Graphs of Linear Equations

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Algebra 2 Lv 1

1 Warmup

1. Welcome/expectations signatures on desk
2. Got calculators?
3. Write down homework: Read Section 2.3, p. 82-85. Problems: 1-3, 5-15 odd numbered, 16-18, 19-35 odd, 37-39, 41-79 odd.
4. What is the slope of the graph of this equation:

$$3y - 6x = 9$$

2 Slope-intercept form

We can learn about the graphs of linear equations by forcing the equations into certain forms.

Equation	Points	Slope	y -int
$y = 2x + 3$	(0,)(1,)		
$y = -1x + 2$	(0,)(1,)		
$y = \frac{1}{2}x - 4$	(0,)(1,)		

The *slope-intercept form* of a linear equation is

$$y = mx + b$$

What is its slope? Its y -intercept?
(examples)

3 The “standard form”

It’s a misleading name; it’s no more standard than the slope-intercept form, but that’s its name so we deal with it!

The *standard form* of a linear equation is in the form

$$Ax + By = C$$

How do we find the y -intercept?

$$\begin{aligned}A \cdot 0 + By &= C \\By &= C \\y &= \frac{C}{B}\end{aligned}$$

How do we find the x -intercept?

So we see that the standard form tells us both intercepts.
How do we convert this form to the slope-intercept form?
How do we convert the slope-intercept form to this form?