WIN week 3 day 1 writing equations of lines in slope intercept form

Learning Target – students will write equations of lines in slope intercept form.

The equation of a line in **slope intercept form** is $y=mx+b$, where m= slope and b= y intercept.

1. Write the equation of a line with a slope of 3 and a y intercept of 5.
2. Explain what the slope and y intercept tell you about the line in question 1.

Practice. For each question, write the equation of the line and tell what the slope and y intercept tell you about the line.



1. Write the equation of the line in the graph below.
2.  B. 

Practice: Write the equation of each line.



Sometimes you are not given the slope or the y intercept, so you have to find them before you write the equation.

1. Write the equation of a line in slope intercept form with a slope of 2 through the point (5, -3).

Practice – write the equation of each line in slope intercept form.



1. Write the equation of a line in slope intercept form through the points (-3,-1) and (-2,-2)

Practice:



Win week 3 day 2 warm up

1. Write the equation of a line in slope intercept form with a slope of 3/2 and a y intercept of -4.
2. Write the equation of a line in slope intercept form with a slope of -2 through the point (-1,3).
3. Write the equation of a line in slope intercept form through the points (-4,-3) and (4,2).
4. Check this with Mrs. Blanton and then Kahn academy work day.

Win week 3 day 3 writing equations of lines in point slope form

Students will write equations of lines in point slope form.

Another form for the equation of a line is **point slope form** $y-y\_{1}=m(x-x\_{1})$ where m is the slope and $\left(x\_{1}, y\_{1}\right)$is a point on the line. This form of the equation of a line is easier to use when you are given a point and slope and can be converted into slope intercept form.

1. Write the equation of a line in point slope form with a slope of 3 through the point (-2,1).

Practice:



1. Write the point slope form of the equation of a line through the points (-1,3) and (4, -7).

Practice:



To graph the equation of a line it is helpful to convert the line to slope intercept form.

1. Write the equation of a line in point slope form through the point (-5,1) with a slope of 2. Then convert you equation to slope intercept form.

Practice – convert to slope intercept form. Name the slope and y intercept of each line.





1. Write the equation of the given line in point slope form.



Win week 3 day 4

1. Write the equation of the line through (-7, -2) and (-6, 3) in point slope form.
2. Convert the equation to slope intercept form.
3. Name the slope and y intercept of the equation.
4. Check this in with Mrs. Blanton and then kahn academy work day.

Win week 3 day 5 Standard form

Students will convert equations of lines to standard form.

The equation of a line in standard form is Ax+By=C. The following must be true

* No fractions or decimals
* A must be positive
* The GCF of A, B and C must equal 1.

Examples

1. $y=\frac{4}{5}x-5$ 2. $2x=4y+8$ 3. $y-1=\frac{2}{3}(x-4)$

Practice:





