January 25, 2012

Algebra 1

Get out your homework – Melon worksheet

16) $x + 3y = -18$

$-x \qquad -x$

$3y = -1x - 18$

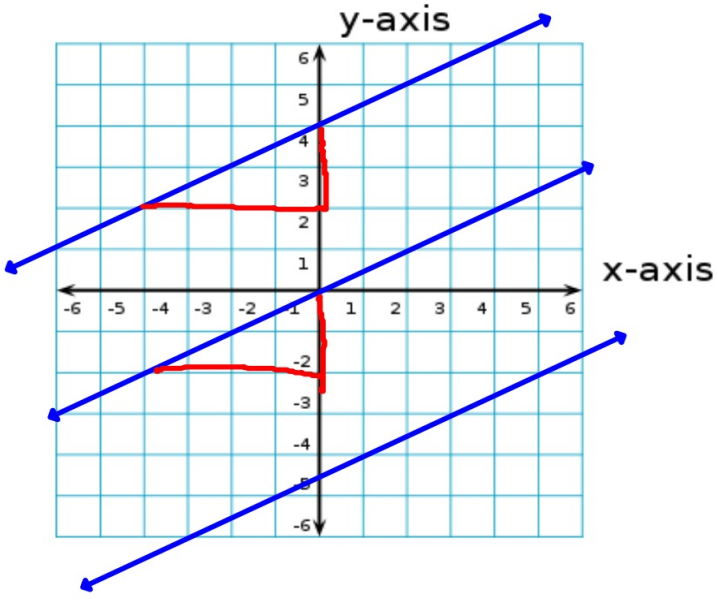
$\frac{3y}{3} = \frac{-1x - 18}{3}$

$y = -\frac{1}{3}x - 6$

1/25 - Equations of lines parallel to one line through another point.

What does parallel mean?

The lines never intersect



Parallel lines have the same slope.

What is the slope of this line?

$$y = 3x - 1$$

$m = 3$

What is the slope of a line parallel to that line?

$m = 3$

What is the slope of this line?

$$y = -\frac{1}{2}x + 4$$

$m = -\frac{1}{2}$

What is the slope of a line parallel to that line?

$m = -\frac{1}{2}$

Write the equation of the line that goes through the given point and is parallel to the given line.

$(2,-3)$ $y = -4x + 3$

$m = -4$

1. Write the formula
2. Find m from the equation
3. Substitute x, y and m
4. Solve the equation for b
5. Write the equation
6. Substitute m and b

$y = mx + b$

$-3 = -4 \cdot 2 + b$

$-3 = -8 + b$

$+8 \quad +8$

$5 = b$

$y = mx + b$

$y = -4x + 5$

$(-1,4)\quad y = 2x - 5$

$m = 2$

$y = mx + b$

$4 = 2 \cdot -1 + b$

$4 = -2 + b$

$+2 \quad +2$

$6 = b$

$y = mx + b$

$y = 2x + 6$

$(3,1)$ $y = -2x + 4$

$(-4,-2)$ $y = -x + \frac{2}{5}$

$m = -1$

$y = mx + b$

$-2 = -1 \cdot -4 + b$

$-2 = 4 + b$

$-4 \quad -4$

$-6 = b$

$y = mx + b$

$y = -1x + -6$

$\boxed{y = -x - 6}$

$(1,-2)$ $y = \frac{2}{3}x - 4$

$m = \frac{2}{3}$

$y = mx + b$

$-2 = \frac{2}{3} \cdot 1 + b$

$-2 = \frac{2}{3} + b$

$-\frac{2}{3} \quad -\frac{2}{3}$

$-2\frac{2}{3} = b$

$y = mx + b$

$y = \frac{2}{3}x - 2\frac{2}{3}$

HOMEWORK

Pink Worksheet 2

Due Thursday