

1. Grab your ISN and have a seat.
2. Title pages 36-37 DO NOW 9/5-9/8
3. Split page 36 into a top and bottom. On the top half copy and answer the following.

Write an equation of the line given the slope and a point.

1. $(4, -3)$ $m = -1$ $y = -x + 1$
2. $(-5, -6)$ $m = 2$

$$y - (-3) = -1(x - 4)$$

$$y + 3 = -1x + 4$$

$$y = -x + 1$$

$$y + 6 = 2(x + 5)$$

$$y + 6 = 2x + 10$$

$$y = 2x + 4$$

3. $(-7, 2)$ $m = 3$

$$y - 2 = 3(x + 7)$$

$$y = 3x + 23$$

4. $(3, 5)$ $m = -2$

$$y - 5 = -2(x - 3)$$

$$y = -2x + 11$$

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TOC page 38 Parallel Line Equations

→ Parallel lines are lines with the SAME SLOPE! * you can tell by looking at $y = mx + b$

$y = 5x + 7$ ← SAME SLOPE!!! ← $y = 5x - 4$

→ To write equations of parallel lines, use the SAME SLOPE and a different point.

→ Example: Write the equation of the line parallel to $y = -2x + 4$ through the point $(4, -2)$

STEPS	WORK
① What is the slope and point you use?	$y = -2x + 4$ slope = m point $(4, -2)$
② Plug into the point-slope form	$y - y_1 = m(x - x_1)$ $y - (-2) = -2(x - 4)$
③ Distribute	$y + 2 = -2x + 8$
④ Get y by itself	$y = -2x + 6$ which is parallel to $y = -2x + 4$ because they have the same slope

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Assignment done in class on 9/7/17

1. Write the equation of a line that is parallel to $y = -1/4x - 6$ that passes through the point $(12, 4)$.

2. Write the equation of a line that is parallel to $y = -6x + 2$ that passes through the point $(-2, -3)$

3. Write the equation of a line that is parallel to $y = -6x + 2$ and that has a y-intercept of 6

4. Write the equation of a line that is parallel to $y = 2x + 3$ and that has a y-intercept of 12

5. Find the equation of a line parallel to $y = 3x + 1$ that goes through the point $(2, 8)$?

6. Find the equation of a line parallel to $y = 2x + 7$ and that goes through the point $(4, 12)$?

7. Find the equation of a line parallel to $y = 4x + 12$ that goes through the point $(1, 9)$?

8. Find the equation of a line parallel to $y = 4x + 12$ that goes through the point $(-2, 3)$?

9) Find the equation of a line parallel to $y = 5$ that goes through the point $(-2, -3)$?

10) Find the equation of a line parallel to $x = 5$ that goes through the point $(6, -3)$?

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