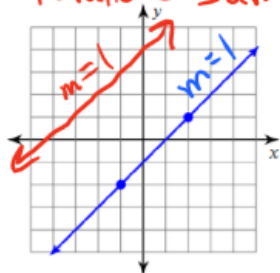


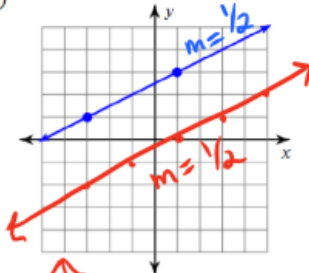
Finding Slope

For problems 1 and 2 create a line parallel to given one. For problems 3 and 4 create a line perpendicular to the given one. Explain by identifying the slope of the original line and your line.

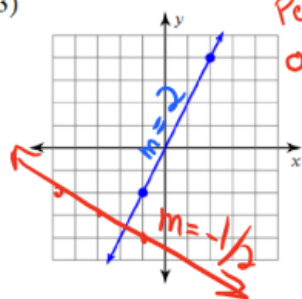
1) Parallel = same slope



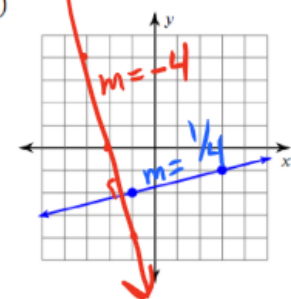
2) Parallel = same slope



3) Perpendicular opp. recip. slope



4) Perpendicular opp. recip. slope



Write an equation of a line opp. rec. slope perpendicular to each given line.

5) $y = \frac{7}{5}x + 2$
 $m = -\frac{5}{7}$
 $y = -\frac{5}{7}x + 2$

6) $y = -\frac{2}{5}x + 4$
 $m = \frac{5}{2}$
 $y = \frac{5}{2}x + 3$

* b value is made up.

Write an equation of a line same slope parallel to each given line.

7) $y = -\frac{7}{2}x + 3$
 $m = -\frac{7}{2}$
 $y = -\frac{7}{2}x + 4$

8) $y = -\frac{5}{3}x + 2$
 $m = -\frac{5}{3}$
 $y = -\frac{5}{3}x + 5$

Write an equation for a line that is parallel for 9 and 10 and perpendicular for 11 and 12 to the line created from the given points.

9) $(-8, -2), (-7, 5)$ Parallel \rightarrow same slope
 $m = \frac{-2 - 5}{-8 - (-7)} = \frac{-7}{-1} = 7$ Equation: $y = 7x + 8$

10) $(-4, -10), (-1, -1)$ parallel \rightarrow same slope
 $m = \frac{-10 - (-1)}{-4 - (-1)} = \frac{-9}{-3} = 3$ Equation: $y = 3x + 4$

11) $(-3, -13), (-11, -19)$ Perp. \rightarrow opp. recip. slope
 $m = \frac{-13 - (-19)}{-3 - (-11)} = \frac{6}{8} = \frac{3}{4}$ Equation: $y = -\frac{4}{3}x + 2$

12) $(-20, 1), (-19, -8)$ Perp. \rightarrow opp. recip. slope
 $m = \frac{1 - (-8)}{-20 - (-19)} = \frac{9}{-1} = -9$ Equation: $y = \frac{1}{9}x + 4$