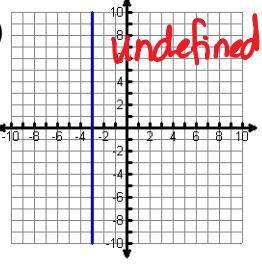
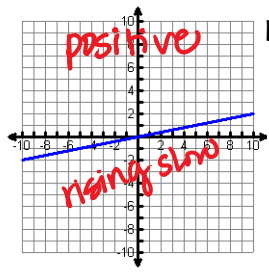
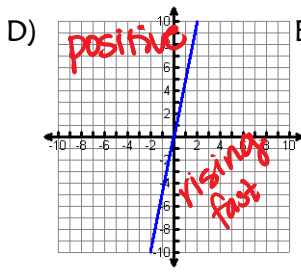
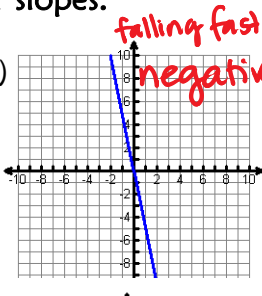
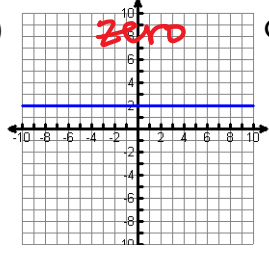
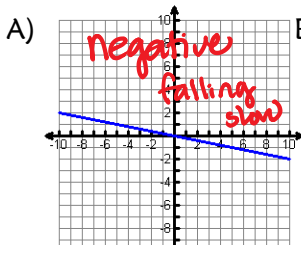


Day 9 - 3.5/3.6 Homework

Name: Key

(1-6) Match the following graphs with their slopes.



- 1) $m = -5$ C
- 2) $m = 0$ B
- 3) $m = \frac{1}{5}$ E
- 4) $m = \text{undefined}$ F
- 5) $m = 5$ D
- 6) $m = -\frac{1}{5}$ A

(7-9) Find the slope of each line that passes through the points. Identify the type of line.

7) $(5, 2)$ and $(4, -1)$

$$m = \frac{2 - (-1)}{5 - 4} = \frac{3}{1}$$

$m = 3$
rising line

8) $(-2, 3)$ and $(4, 6)$

$$m = \frac{6 - 3}{4 - (-2)} = \frac{3}{6} = \frac{1}{2}$$

$m = \frac{1}{2}$
rising line

9) $(\frac{9}{2}, 5)$ and $(\frac{1}{2}, -3)$

$$m = \frac{5 - (-3)}{\frac{9}{2} - \frac{1}{2}} = \frac{8}{\frac{8}{2}} = \frac{8}{4} = 2$$

$m = 2$
rising line

10) Find the missing coordinate: If the slope of TV is $\frac{1}{2}$ and T = $(x, 8)$ and V = $(6, 16)$, what is the value of x?

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{1}{2} = \frac{16 - 8}{6 - x}$$

$$\frac{1}{2} = \frac{8}{6 - x}$$

$$6 - x = 16$$

$$-x = +10$$

$x = -10$

(11-12) Use slopes to determine whether the lines are parallel or perpendicular to each other.

11) \overline{AB} and \overline{CD} for A(-10, 4), B(-5, 6), C(8, 9), and D(-2, 5).

$$m_{\overline{AB}} = \frac{6 - 4}{-5 - (-10)} = \frac{2}{5}$$

$$m_{\overline{CD}} = \frac{9 - 5}{8 - (-2)} = \frac{4}{10} = \frac{2}{5}$$

$\overline{AB} \parallel \overline{CD}$
b/c they have the same slope

12) \overline{JK} and \overline{LM} for J(1, 3), K(5, 2), L(3, 5), and M(2, 1).

$$m_{\overline{JK}} = \frac{2 - 3}{5 - 1} = -\frac{1}{4}$$

$$m_{\overline{LM}} = \frac{5 - 1}{3 - 2} = 4$$

$\overline{JK} \perp \overline{LM}$ b/c they have opposite reciprocal slopes

13) If the slope of one line is 2 and the slope of another line is $\frac{1}{2}$, are the lines parallel, perpendicular, or neither. Explain your answer choice.
The 2 lines are neither parallel nor \perp b/c their slopes are not the same and they are not opposite reciprocals. The 2 lines would intersect, just not at right \angle 's.