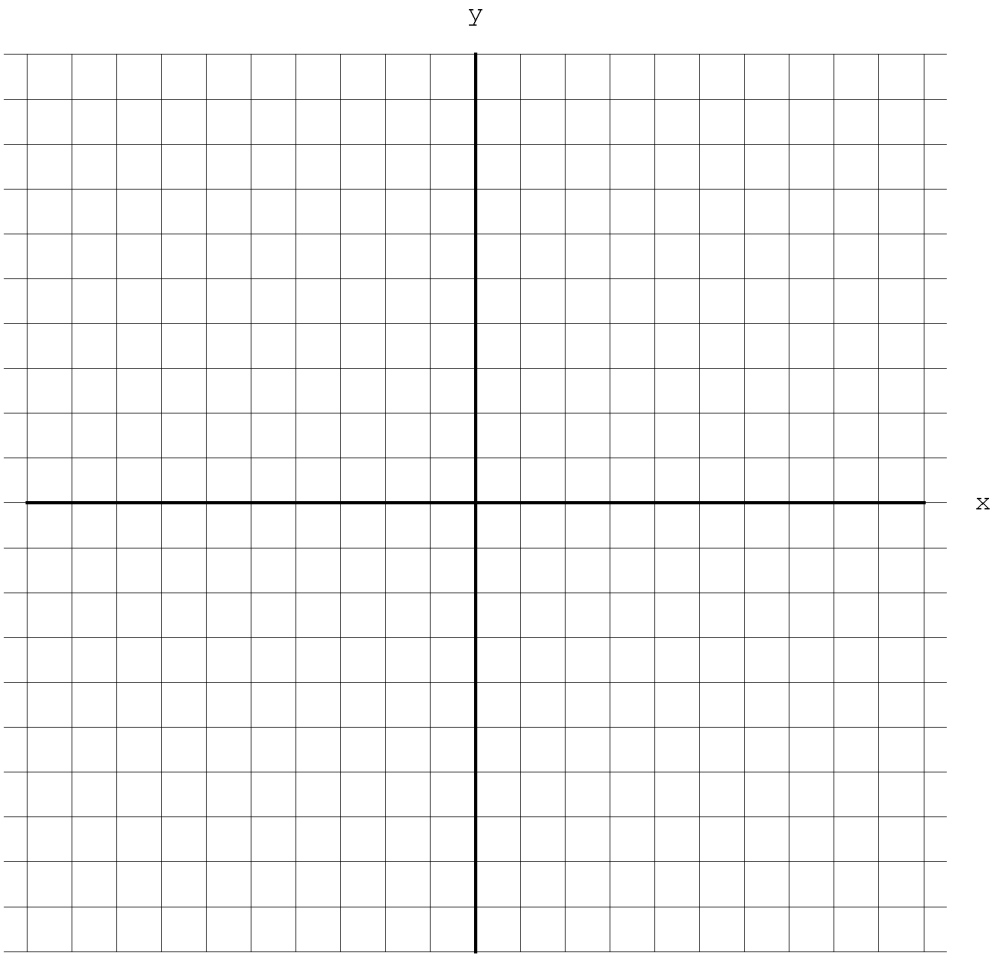
Name _____

[06-02-06-T9]

■ **A. Graph the following. (Label each line you graph and indicate the slope: so for [1] you would label the line l_1 and write $m = 1$ next to the l_1.)**



[1] The line l_1 whose slope is 1 and that passes through point $P(0, 0)$.

[2] The line l_2 whose slope is 2 and that passes through point $P(0, 0)$.

[3] The line l_3 whose slope is -1 and that passes through point $P(0, 0)$.

[4] The line l_4 whose slope is -2 and that passes through point $P(0, 0)$.

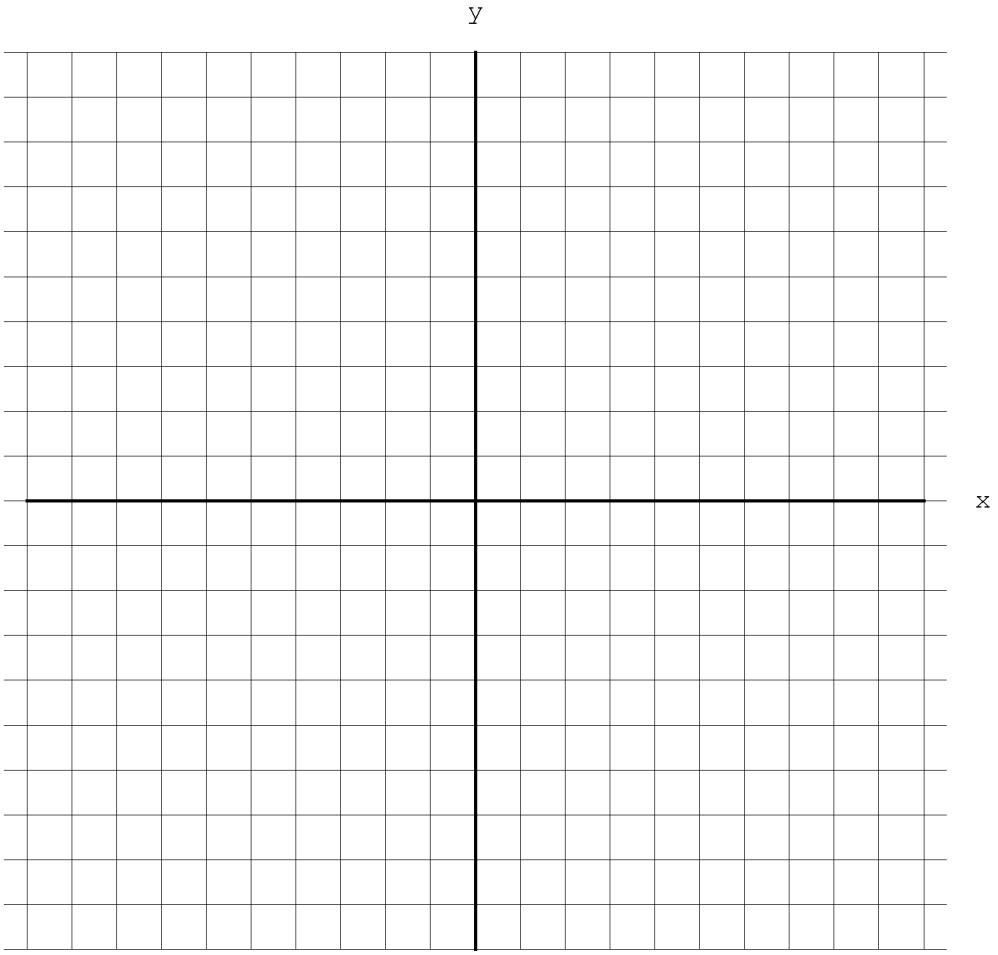
[5] The line l_5 whose slope is 0.5 and that passes through point $P(0, 0)$.

[6] The line l_6 whose slope is $\frac{-1}{2}$ and that passes through point $P(0, 0)$.

[7] The line l_7 whose slope is 5 and that passes through point $P(0, 0)$.

[8] The line l_8 whose slope is -5 and that passes through point $P(0, 0)$.

■ **B. Graph the following. (Label each line you graph and indicate the slope: so for [1] you would label the line l_1 and write $m = 1$ next to the l_1.)**



[1] The line l_1 whose slope is 1 and that passes through point $P(2, 3)$.

[2] The line l_2 whose slope is 2 and that passes through point $P(-3, -4)$.

[3] The line l_3 whose slope is -1 and that passes through point $P(2, 3)$.

[4] The line l_4 whose slope is -2 and that passes through point $P(-3, -4)$.

[5] The line l_5 whose slope is 0 and that passes through point $P(3, 4)$.

[6] The line l_6 whose slope is 0 and that passes through point $P(-4, -5)$.

[7] The line l_7 whose slope is *undefined* and that passes through point $P(-5, 3)$.

[8] The line l_8 whose slope is *undefined* and that passes through point $P(4, -5)$.

■ C. Find the value of the unknown coordinate in each the following.

[1] The slope of a line is *2* and the points $P(2, 3)$, $Q(5, y)$ are on this line.

[2] The slope of a line is *3* and the points $P(2, 5)$, $Q(5, y)$ are on this line.

[3] The slope of a line is *1* and the points $P(0, 3)$, $Q(5, y)$ are on this line.

[4] The slope of a line is -2 and the points $P(2, 0)$, $Q(5, y)$ are on this line.

[5] The slope of a line is $\frac{4}{3}$ and the points $P(2, 3)$, $Q(5, y)$ are on this line.

[6] The slope of a line is $\frac{-9}{2}$ and the points $P(2, 3)$, $Q(5, y)$ are on this line.

■ D. Find the value of the unknown coordinate in each the following.

[1] The slope of a line is *1* and the points $P(0, 0)$, $Q(x, 5)$ are on this line.

[2] The slope of a line is -1 and the points $P(0, 0)$, $Q(x, 5)$ are on this line.

[3] The slope of a line is *2* and the points $P(0, 3)$, $Q(x, 6)$ are on this line.

[4] The slope of a line is *0* and the points $P(2, 7)$, $Q(5, y)$ are on this line.

[5] The slope of a line is *0* and the points $P(-10, 3)$, $Q(x, 3)$ are on this line.

[6] The slope of a line is *undefined* and the points $P(2, 3)$, $Q(x, -15)$ are on this line.

■ E. Find the value of the unknown coordinate in each the following.

[1] The slope of a line is *1* and the line passes through the point *(0, 0)*. Point *P* is on the line. If the *x-coordinate* of *P* is *3,* what is the *y-coordinate* of *P*?

[2] The slope of a line is *2* and the line passes through the point *(0, 0)*. Point *P* is on the line. If the *x-coordinate* of *P* is *3,* what is the *y-coordinate* of *P*?

[3] The slope of a line is *-1* and the line passes through the point *(0, 0)*. Point *P* is on the line. If the *x-coordinate* of *P* is *3,* what is the *y-coordinate* of *P*?

[4] The slope of a line is $-\frac{1}{2}$ and the line passes through the point *(0, 0)*. Point *P* is on the line. If the *x-coordinate* of *P* is *3,* what is the *y-coordinate* of *P*?

[5] The slope of a line is *2* and the line passes through the point *(0, 3)*. Point *P* is on the line. If the *x-coordinate* of *P* is *3,* what is the *y-coordinate* of *P*?

[6] The slope of a line is *1* and the line passes through the point *(0, 5)*. Point *P* is on the line. If the *x-coordinate* of *P* is *3,* what is the *y-coordinate* of *P*?

[7] The slope of a line is -1 and the line passes through the point *(0, −2)*. Point *P* is on the line. If the *x-coordinate* of *P* is *5,* what is the *y-coordinate* of *P*?

■ **Answers to parts C, D, E**

■ **C.**

[1] 9

[2] 14

[3] 8

[4] -6

[5] 7

[6] $\frac{-21}{2}$

■ **D.**

[1] 5

[2] -5

[3] $\frac{3}{2}$

[4] 7

[5] $x \in \mathbb{R}$

[6] 2

■ **E.**

[1] 3

[2] 6

[3] -3

[4] $\frac{-3}{2}$

[5] 9

[6] 8

[7] -17

Formulae