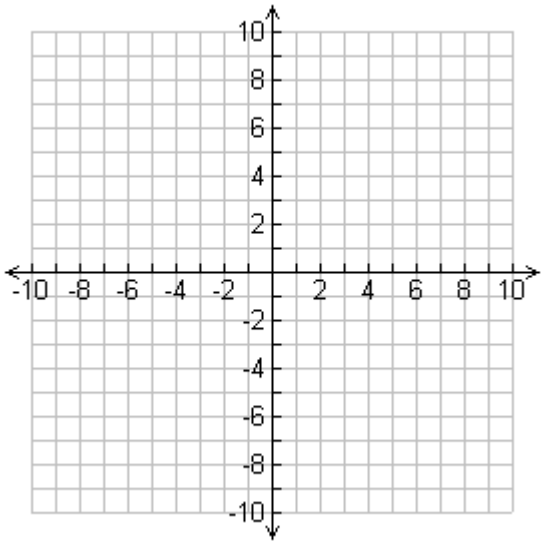
Name: _____

Period: _____

Slope, Midpoint & Distance

1. Given A(9, -5) and B(-6, 5)

a. Find the slope.
b. Find AB.
c. Find Q, the midpoint of $\overline{AB}$.
d. Find the equation of the line that passes through $\overline{AB}$.



Answers:

a. slope = _____

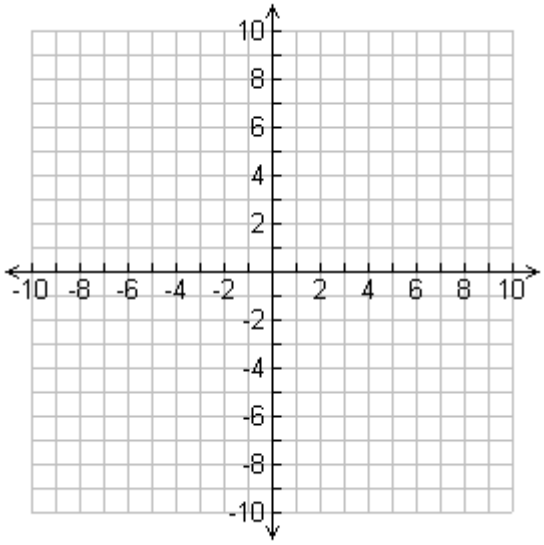
b. AB = _____

c. Q = (_____, _____)

d. y = _____

2. Given R(-2, 5) and T(4, 1)

a. Find the slope.
b. Find RT.
c. Find S, the midpoint of $\overline{RT}$.
d. Find the equation of the line that passes through $\overline{RT}$.



Answers:

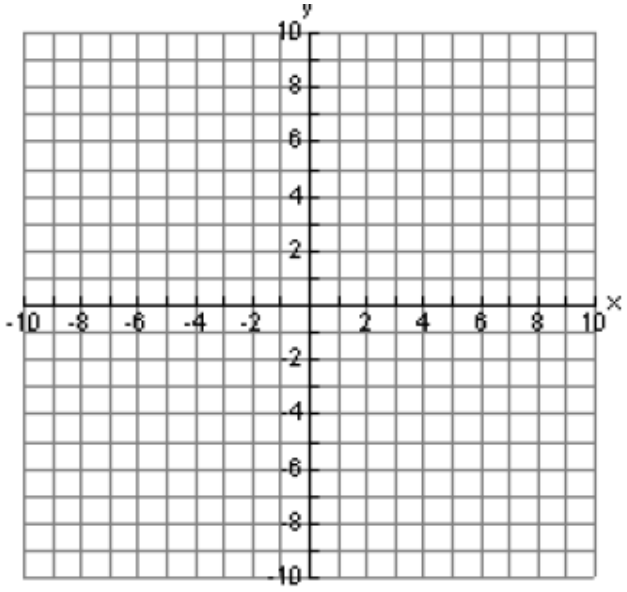
a. slope = _____

b. RT = _____

c. S = (_____, _____)

d. y = _____

3.



a. Given A(0, -8), B(5, 9), C(7, -6), D(-8, 6), E(3, 0), F(-4, -2), G(-6, 2), label the points on the graph.

b. Find the slope of $\overleftrightarrow{BE}$ and $\overleftrightarrow{EG}$. What does the slope indicate about these lines?

Slope of BE = _____	Slope of EG = _____	What do you know about the lines?

c. Find the slope of $\overleftrightarrow{FE}$ and $\overleftrightarrow{AC}$. What does the slope indicate about these lines?

Slope of FE = _____	Slope of AC = _____	What do you know about the lines?

d. Find the length of $\overline{AE}$.

AE = _____

e. Find the midpoint of $\overline{CF}$.

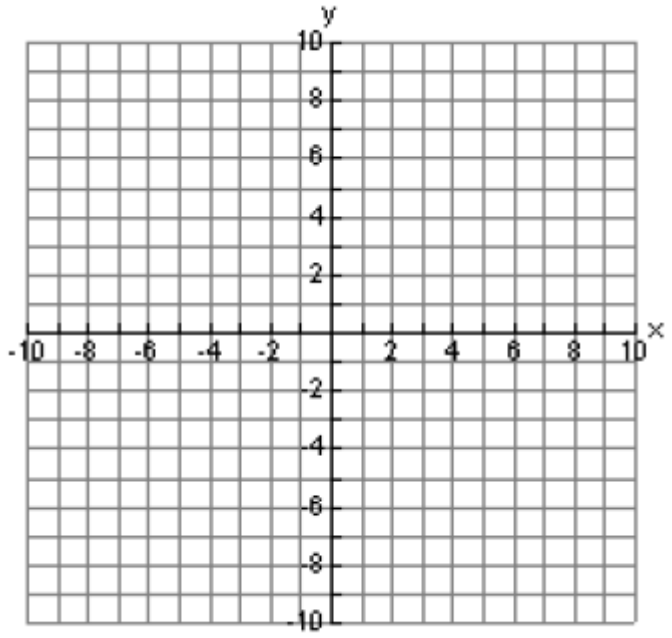
Midpoint = _____

f. Find the length and midpoint of $\overline{CD}$.

CD = _____

Midpoint = _____

4.



a. Given H(-1, -3), I(0, 6), J(6, -3), K(-6, 0), L(-4, 4), M(1, 2), N(3, 7), label the points on the graph.

b. Find the slope of $\overleftrightarrow{MN}$ and $\overleftrightarrow{LM}$. What does the slope indicate about these lines?

Slope of MN =	Slope of LM = _____	What do you know about the lines?

c. Find the slope of $\overleftrightarrow{HK}$ and $\overleftrightarrow{MJ}$. What does the slope indicate about these lines?

Slope of HK = _____	Slope of MJ = _____	What do you know about the lines?

d. Find the length of $\overline{KI}$.

KI = _____

e. Find the midpoint of $\overline{KM}$.

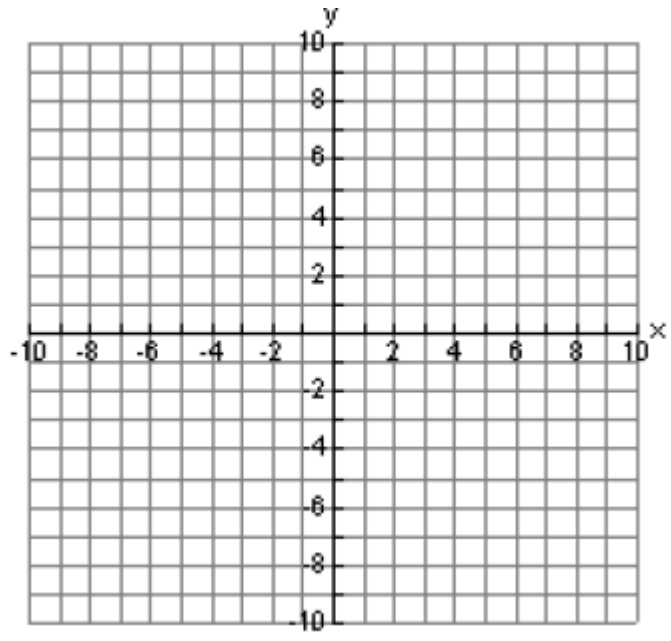
Midpoint = _____

f. Find the length and midpoint of $\overline{JL}$.

JL = _____

Midpoint = _____

If you finish the above problems, work on these for extra credit.



A square is represented by the points A(1, -2), B(-3, 2), C(-7, -2), and D(-3, -6).

a. Find the equation of the line passing through each side of square ABCD.

b. Find the slope of each side of square ABCD.

c. Determine which sides are perpendicular and which sides are parallel.

d. Calculate the length of each line segment that makes up square ABCD.