Name: _____ Date: _____ Hour: _____

10

Distance and Midpoint Homework #2

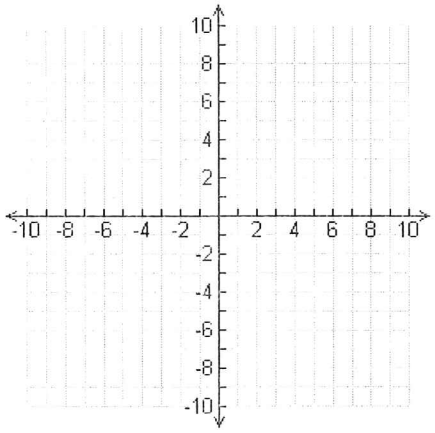
Directions: Use the Pythagorean Theorem or Distance Formula to find the distance of each segment, and then find the midpoint of each segment. You must simplify radicals and fractions!!!!

1. G(-3,2), H(6,5)

Distance: $3\sqrt{10}$

$\sqrt{90}$

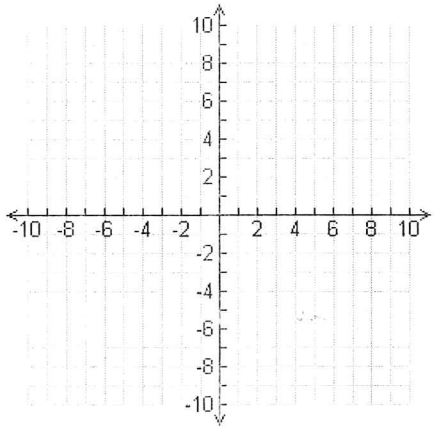
Midpoint: $(\frac{3}{2}, 7/2)$



2. J(-2,-2), K(3,4)

Distance: $\sqrt{61}$

Midpoint: $(\frac{1}{2}, 1)$

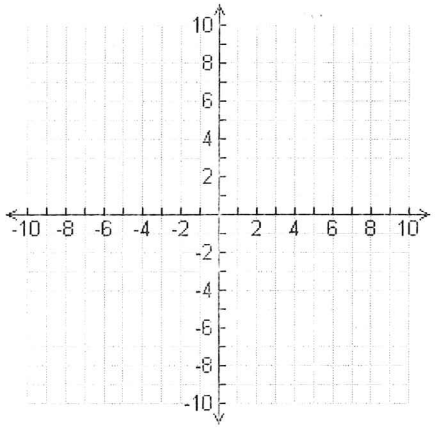


3. D(-5,3), E(1,5)

Distance: $2\sqrt{10}$

$\sqrt{40}$

Midpoint: $(-2,4)$



Directions: M is the midpoint of $\overline{XY}$. Find the missing endpoint's coordinates based on the given information.

4. M(-10,-3), X(-9,-2) Find Y(x,y)

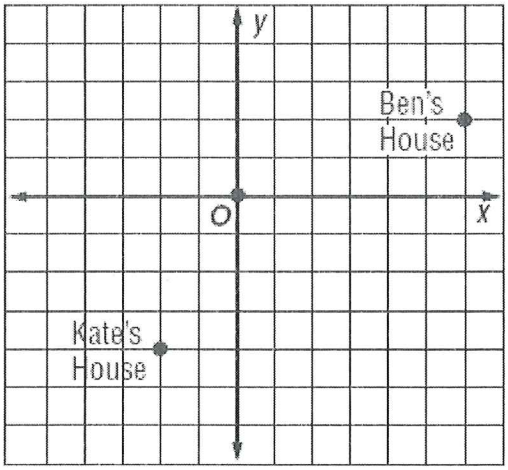
Y(-11, -4)

5. M(6,-2), Y(4,2) Find X(x,y).

X(8,-6)

For the next two questions, use the map where one unit on the grid corresponds to 100 yards.

6. Ben asks Katie to meet him one night. He would like to ask her on a date. He decides to meet her half way to ask her. What is the halfway point where Ben will ask her out?



midpoint:

(2,-1)

7. Katie say "YES!". Ben is planning to pick her up. What is the distance he will need to travel in order to get to her house?

distance is 10 units, but 1 unit = 1000 yards

10 x 100 = 1,000 yards