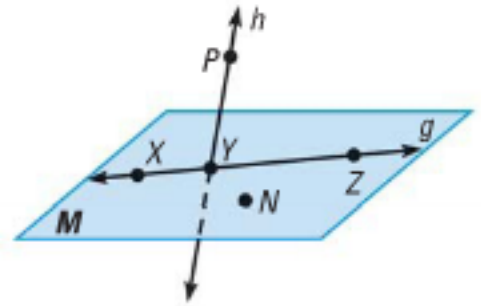Name: _____

Date: _____   Period: _____

Use the diagram below to answer questions #1 – 5.

1) Give two other names for $\overleftrightarrow{XY}$.

2) Name three points that are collinear.

3) Name four points that are coplanar.

4) Name a pair of opposite rays.

5) Name the intersection of line h and plane M.

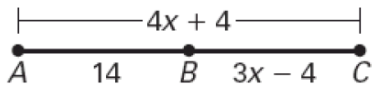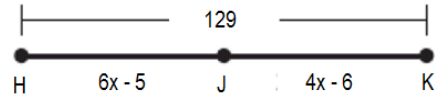**Use the points $A(4, -3), B(1, 1), C(-1, 2)$, and $D(3, 5)$ for questions #6 – 9.**

6) What is the midpoint of $\overline{AB}$?

7) What is the midpoint of $\overline{BC}$?

8) *C* is the midpoint of $\overline{AE}$. Find the coordinates of the **other endpoint** *E*.
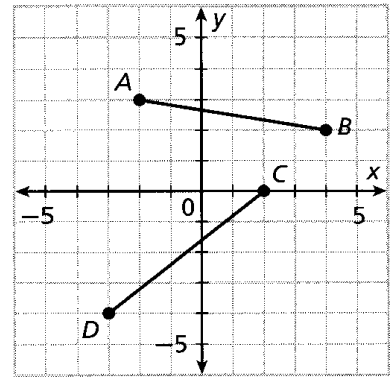
9) Please find *AD*. Round to the nearest tenth.

10) a. Find AC

$\overline{4x + 4}$

A   14   B $3x - 4$ C

b. Find HJ

129

H   6x - 5   J   4x - 6   K
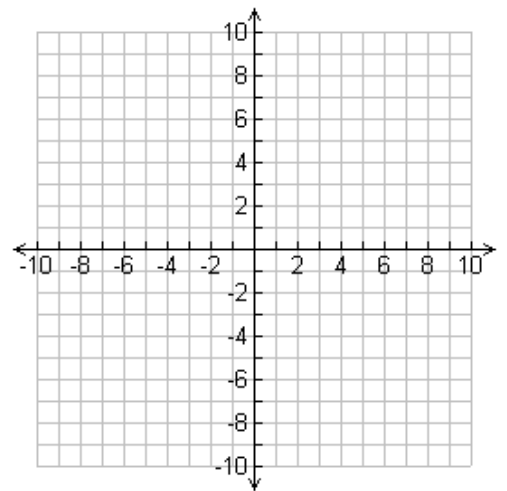
11) Using the diagram below, is $\overline{AB} \cong \overline{CD}$? Show your work.

12) Please sketch the following:

    a. A line that that is in the plane.

    b. A plane and a line that does not intersect the plane.

    c. A line that intersects a plane at one point.

13) Point *B* is between *A* and *C* on $\overline{AC}$. $AB = x+3$, $BC = 2x+1$, and $AC = 10$. Please solve for *x* and find *AB* and *BC*. (Note : figure is not drawn to scale)
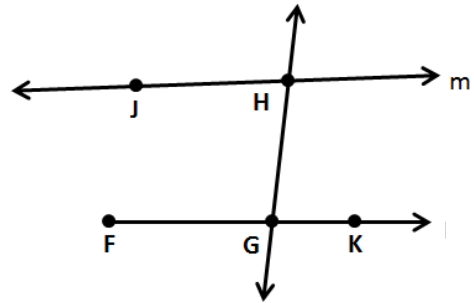

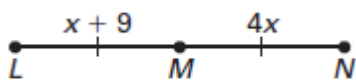14) Using the diagram below, give two **different** examples of each of the following:
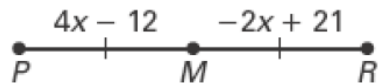
a. A segment

b. A ray

c. A line

In the diagrams below, *M* is the midpoint of the segment.

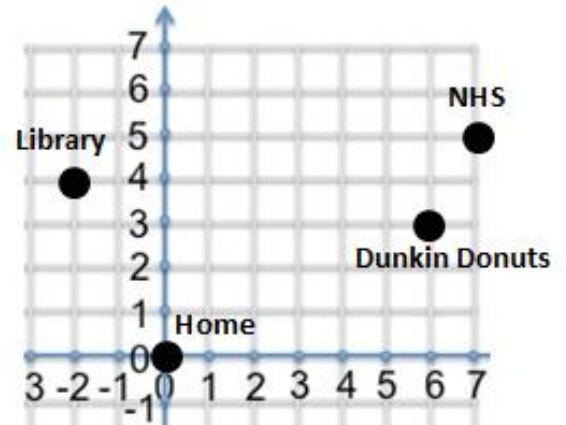15) a. Find *LN*.   b. Find *PR*.

16) The map at the right is a map of places that Lizzie goes frequently. Coordinates are given in miles. The locations that Lizzie visits are:

Home (0,0), Dunkin Donuts (6,3), NHS (7,5), and Library (-2, 4).

a. How far is it from Lizzie's house to Dunkin Donuts to the nearest tenth?

b. If Lizzie wanted to drive from NHS to the Library and make it back to school before the end of the school day, how far would she have to travel in **TOTAL** to the nearest tenth?

Answer Key :

1) $\overleftrightarrow{YX}, \overrightarrow{YZ}, \overrightarrow{ZY}, \overleftrightarrow{XZ}, \overrightarrow{ZX}$, line g

2) X, Y, Z

3) X, Y, N, Z

4) $\overrightarrow{YZ}$ and $\overrightarrow{YX}$

5) Point Y

6) (2.5 , -1)

7) (0, 1.5)

8) E(-6 , 7)
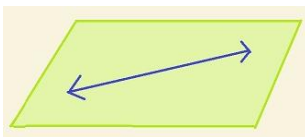
9) 8.1

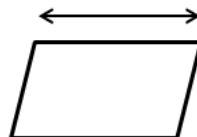10) a. 28   b. 79

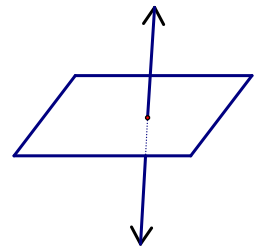11) $AB \approx 6.1$, $CD \approx 6.4$; Not congruent because they are not the same length.

12) a.   b.   c.

13) $x = 2$, $AB = 5$, $BC = 5$

14) a. $\overline{JH}, \overline{HG}, \overline{GF}, \overline{KG}$ b. $\overrightarrow{HJ}, \overrightarrow{FG}, \overrightarrow{FK}, \overrightarrow{GK}, \overrightarrow{HG}$ c. $\overleftrightarrow{JH}, \overleftrightarrow{HJ}, \overleftrightarrow{HG}, \overleftrightarrow{GH}$, line m

15) a. 24   b. 20   16) a. 6.7 miles   b. 18.2 miles