DISTANCE & MIDPOINT

AGENDA

Warm-Up

HW Check

Carnival Project

HW - none

16 SCHOOL DAYS LEFT

WARM-UP (WEDNESDAY)

1. Classify the following lines as vertical or horizontal.

HOY   VUX

a) $x = 6$ b) $y = 2$ c) $1 - 3y = 4$ d) $3 + x = 2$

V   H   H   V

2. Angle x and y are supplementary. The measure of angle x is four less than three times the measure of angle y. Find the measure of angle x.
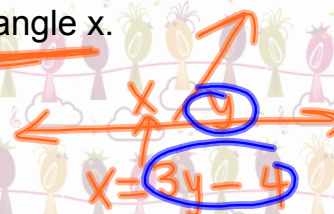
180

$$x + y = 180$$

$$3y - 4 + y = 180$$
$$4y - 4 = 180$$
$$4y = 184$$
$$y = 46°$$

$$x = 3y - 4$$

$$134°$$

Distance & Midpoint

1. (2, 6)

2. (1, 0)

3. $(\frac{a}{2}, \frac{b}{2})$

4. $(\frac{a-1}{2}, \frac{b+5}{2})$

6. (3,4)

   (5,-1)

   (0,-1)

   (-2,4)

7. A

Algebra I   Getting Ready for Geometry
Practice – Midpoint Formula
Name _____   **Period** _____   **Date** _____

Determine the coordinates of the midpoint of the segment with the given endpoints.

1.   (-3, 2) and (7, 10)   2.   (-7, 4) and (9, -4)

3.   (a, b) and (0,0)   4.   (a, b) and (-1, 5)

$$X_1 \; Y_1 \; X_2 \; Y_2$$

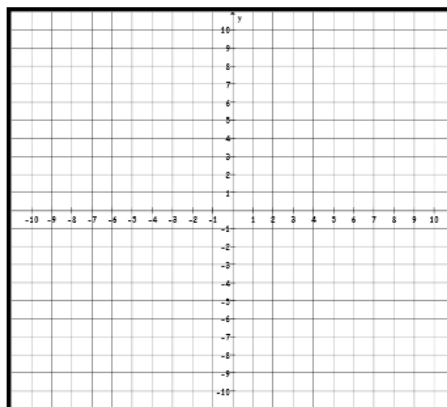$$m = \left(\frac{a + (-1)}{2}, \; \frac{b+5}{2} \right)$$

5.   Plot the points A (0, 6), B (6, 2), C (4, -4), and D (-4, 2)
6.   Find W, the midpoint of $\overline{AB}$ _____

        Find X, the midpoint of $\overline{BC}$ _____

        Find Y, the midpoint of $\overline{CD}$ _____

        Find Z, the midpoint of $\overline{AD}$ _____

7.   Rectangle MNPQ has diagonals that intersect at point X.
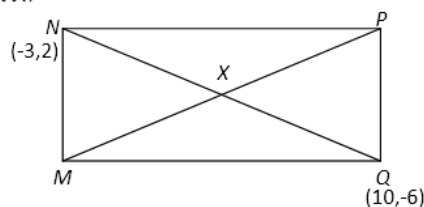
        Which of the following represents the point X?

        A. $\left(\frac{7}{2}, -2 \right)$ B. $\left(\frac{13}{2}, 4 \right)$
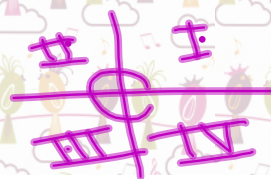
        C $\left(-\frac{13}{2}, -4 \right)$ D. $\left(-\frac{7}{2}, 2 \right)$

        N (-3,2)   P

        X

        M   Q (10,-6)

DISTANCE & MIDPOINT

Using the instructions on the first page, you will create a map of a new theme park on the coordinate grid. Pay attention if the question is asking <u>how far</u> or to find a <u>halfway</u> location.

This is an <u>individual assignment</u> due at the end of the period (with whatever you have completed)

CALCULATORS

If you have your calculator today and would like to turn it in:

On an index card, write the following:

Name: _____

ID #: _____

Calculator #: _____

(find on the barcode by the batteries or engraved on the back)

Calculators are due FRIDAY at the latest, otherwise your name will go on the hold list.

Name: _____
Period: _____

Let's Ride

Congratulations! You are now the owner of a brand new theme park!

Create an appropriate name for your new theme park (not Six Flags or Disney):
_____

Before you open your park to everyone, the city of Richardson asks that you follow their specific instructions below about where all your things can go.

☐ **Step 1**: The cotton candy stand is located at (8, 8). Label the point C. Your hot dog stand needs to be located at (-1, 0). Label that point H.

☐ **Step 2**: You must place the carousel ride (point R) <u>half way</u> between the cotton candy stand and the hot dog stand. Find and plot point R on your grid paper.

☐ **Step 3**: Create a name for your awesome, new, and faster than light, rollercoaster. _____. Place your new rollercoaster in Quadrant II on your graph paper. Label this point A.

☐ **Step 4**: What is the <u>distance</u> between your new rollercoaster (point A) and the hotdog stand (point H)?

☐ **Step 5**: How you forget the bathroom!? Plot point B anywhere you want in Quadrant III. What are the coordinates for point B that you picked? _____

☐ **Step 6**: You only want one bathroom?! Build another bathroom **half way** between your first bathroom (point B) and your rollercoaster (point A). Find and label this point X on your graph paper.

☐ **Step 7**: How far apart are the two bathrooms? *(Hint: do you use midpoint or the distance formula?)*

☐ **Step 8**: Place a pretzel stand anywhere you want in Quadrant IV. Label this point P. How far apart is your rollercoaster (point A) from the pretzel stand (point P)? *(Hint: do you midpoint or distance?)*

Grading Rubric:

Theme park map	
Name of Park	5 pts
Plotting all points correctly	20 pts
Label x-axis/y-axis	5 pts
Pictures! ☺	10 pts
Answering ALL steps	25 pts
Creativity	15 pts
Neatness	5 pts
Showing work	15 pts

BONUS: If you are extra creative and colorful, you can earn up to 10 extra points.