Name_____

Dearbornville City Map Project

With distance formula, midpoint formula, & section formula

DISTANCE FORMULA	MIDPOINT FORMULA	SECTION FORMULA
$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$	$M : \left(\dfrac{x_2 + x_1}{2}, \dfrac{y_2 + y_1}{2} \right)$	$\left(\dfrac{mx_2 + nx_1}{m + n}, \dfrac{my_2 + ny_1}{m + n} \right)$
http://www.purplemath.com/modules/distform.htm	http://www.freemathhelp.com/midpoint-formula.html	http://math.tutorvista.com/geometry/section-formula.html

1. Begin by drawing and labeling the x and y axis on your graph paper. Make sure that your axis cover the entire area of the page and both go from -15 to +15. Imagine that each number represents ONE MILE

2. Plot and label the following locations on your Dearbornville map to begin:

Burger King at (-2, 3)	Wal-Mart at (4, -4)
Panera Cares at (12, 1)	Target at (-12, 7)
City Hall at (-9, -7)	BP gas station at (1, -10)
Post Office at (-3, 13)	

3. Yogurt Town is located at the **midpoint** of Burger King and Target. Plot and label Yogurt Town on the map and write the coordinates of Yogurt Town here _____.

4. The library is located at the **midpoint** of City Hall and the post office. Plot and label the library on the map and write the coordinates of the library here _____.

5. Kroger is located at the 2/3 point between Wal-Mart and Panera (but closer to Walmart). Plot and label Kroger on the map and write the coordinates of Kroger here _____. (**section** formula)

6. Dearbornville High School (DHS) is the **midpoint** between City Hall and Panera. Plot and label DHS on the map and write the coordinates of DHS here _____.

7. The fire station is the **midpoint** between the post office and BP gas station. Plot and label the fire station on the map and write the coordinates of the Fire station here _____.

8. Find the **distance** between City Hall and Target. Write that distance here _____.

9. Find the **distance** between City Hall and the fire station. Write that distance here _____. If the fire station is the **midpoint** between City Hall and Greenfield Village, what are the coordinates for Greenfield Village? Write the coordinates for Greenfield Village here _____. Plot and label Greenfield Village on the map.

10. O'Sushi is located ¼ of the distance between the post office and Panera Cares (but closer to Panera). Plot and label O'Sushi on the map and write the coordinates for O'Sushi here _____. (**section** formula)

11. Fairlane Mall is located at the **midpoint** of City Hall and BP gas station. Plot and label Fairlane Mall on the map and write the coordinates of Fairlane Mall here _____.

12. Eddie Ford High School (EFHS) is located at the **midpoint** of Walmart and City Hall. Plot and label EFHS on the map and write the coordinates of EFHS here _____.

13. Ford is located at the 4/5 point between Burger King and Walmart (but closer to Walmart). Plot and label Ford on the map and write the coordinates of Ford here _____. (**section** formula)

14. Find the **distance** between the post office and Target. Write that distance here _____.

15. Find the **distance** between the post office and Walmart. Write that distance here _____.

16. Find the **distance** between Panera Cares and Target. Write that distance here _____.

17. Find the **distance** between BP gas station and Panera Cares. Write that distance here _____.

18. Find the **distance** between Burge King and BP gas station. Write that distance here _____.

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*MAPS WILL BE GRADED ON NEATNESS, COLORFULNESS, AND PRECISION.

*ANSWERS SHOULD BE RECORDED ABOVE, HOWEVER STUDENTS MUST SHOW ALL WORK ON A SPEARATE PAGE TO RECEIVE FULL POINTS.