

Quarter 1 Project: Lines, Transversals, & Angles

Due Date: Friday, Oct. 25th

In this project, you will be using your knowledge of the relationships between parallel lines and transversals to plot point, graph lines, and find angle measures and linear equations.

Martha's Coffeeshop: $(-3, -5)$ Hi-Way Pizza: $(-6, 2)$ Jeffrey's Bowling Alley: $(7, 10)$ Meyer's Dairy: $(4, 17)$ Jason's house: $(4, -3)$ Kimmy's house: $(1, 9)$

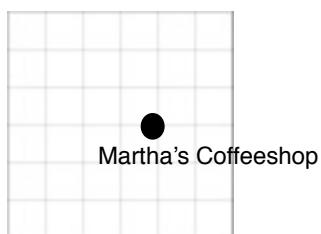
Martha's Coffeeshop and Jeffrey's Bowling Alley are both located on North Oak Lane.

Hi-Way Pizza and Meyer's Dairy are both located on Blue Hills Drive.

Jason and Kimmy both live on Science Park Road.

1. Plot the businesses, houses, and roads on the grid attached. Make and **label your axes** (x and y) and label each point and line as you plot it.

Ex:



2. Find the equations of the lines representing North Oak Lane, Blue Hills Drive, and Science Park Road in both Slope-Intercept and Point-Slope form.

| | Slope-Intercept | Point-Slope |
|-------------------|-----------------|-------------|
| North Oak Lane | | |
| Blue Hills Drive | | |
| Science Park Road | | |

3. North Oak Lane and Blue Hills Drive are _____. Science Park Road is a _____.

4. Your diagram should have 2 large intersections. **Using a color different** from your street and building labels, number the angles formed at the intersections from 1-8.

Using your numbers, list all the

Vertical angles:

Corresponding angles:

Alternate Interior Angles:

Alternate Exterior Angles:

Consecutive Interior Angles:

If your angle 1 measures 85 degrees, list the seven remaining angle measures:

1: 85° 5:

2: 6:

3: 7:

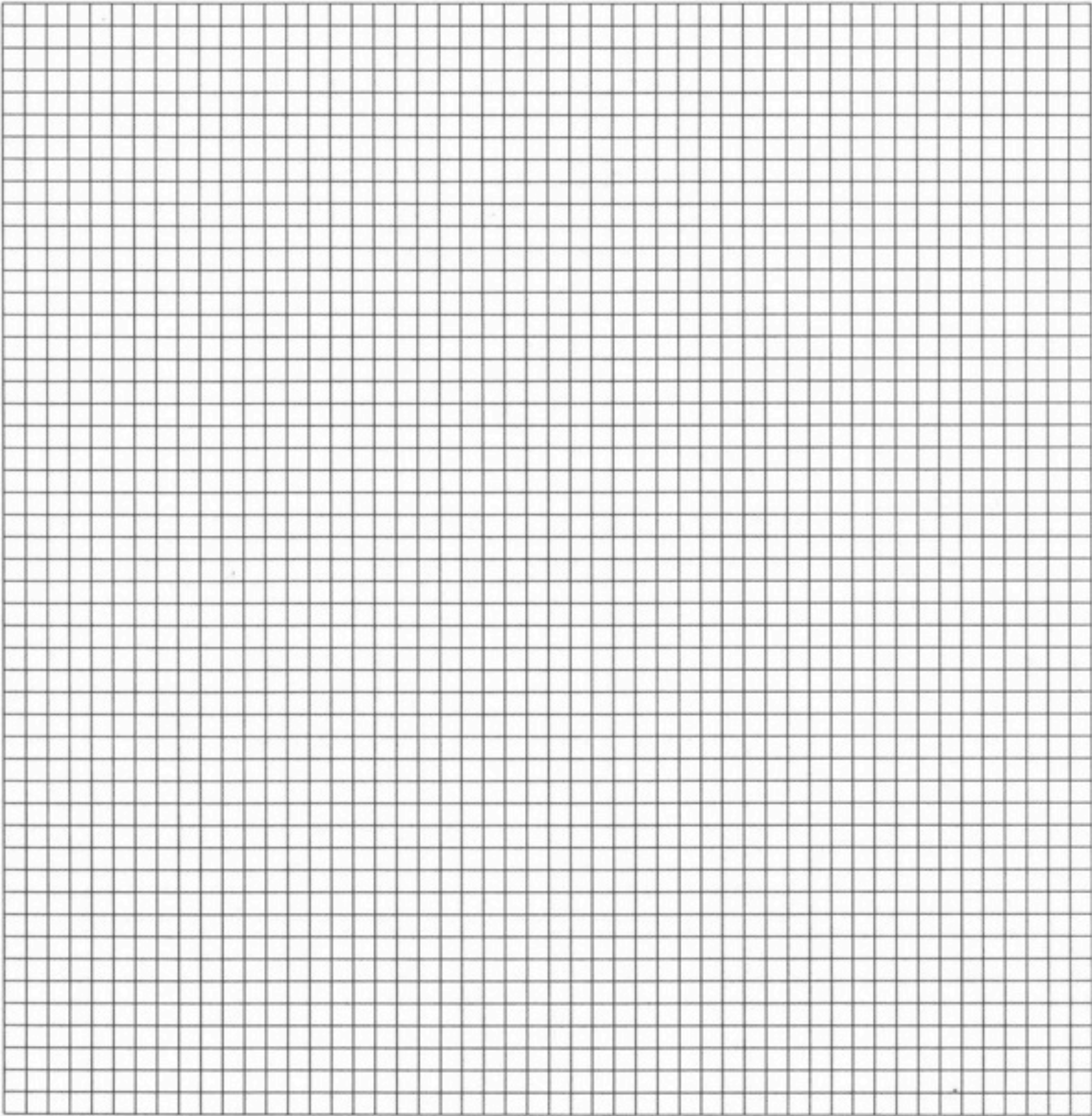
4: 8:

5. Park Forest Pool is located at $(-8, 5)$. It is located on Berkshire Drive, which runs parallel to Science Park Road. Plot Park Forest Pool and Berkshire Drive on your grid. Find the equation of Berkshire Drive in slope-intercept and point-slope form

Slope-Intercept: _____ Point-Slope: _____

6. Galactic Ice Rink is located at $(12, 2)$ on Frigid Way. Frigid Way runs perpendicular to North Oak. Plot Galactic Ice Rink and Frigid Way on your grid. Find the equation of Frigid Way in slope-intercept and point-slope form.

Slope-Intercept: _____ Point-Slope: _____



Rubric:

Question 1: 4 points

Question 2: 6 points

Question 3: 3 points

Question 4: 7 points

Question 5: 4 points

Question 6: 4 points

Neatness: 4 points

Total Points Possible: 32

Due Date: October 25th at the beginning of class.

This project will count as a test grade. Each day late the project is turned in will result in a 4 point deduction. Keep in mind that the quarter closes at the end of this week.