Taxicab Geometry

Name _____

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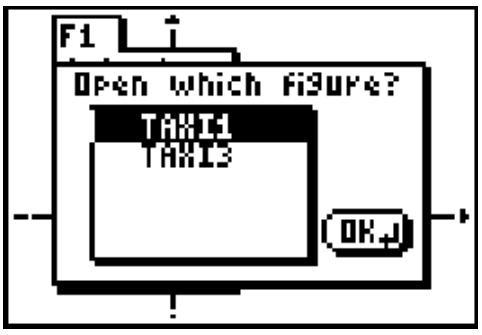
Class _____

In this activity, you will explore:

- *taxicab distances*
- *taxicab circles*
- *taxicab perpendicular bisectors*

Open the Cabri Jr. files *Taxi1* for Problem 1 and *Taxi3* for Problem 3 if your teacher instructs you to do so.

Use this document to record your answers.



Problem 1 – Taxicab distances

1. Why is the taxicab distance between two points longer than the distance you would find in Euclidean geometry?

2. Explain in words how to find the taxicab distance between two points, given their coordinates.

3. What is the formula for the taxicab distance between two points?

Problem 2 – Taxicab circles

4. How is a circle in taxicab geometry different from a circle in Euclidean geometry?

Problem 3 – Taxicab perpendicular bisectors

5. Discuss similarities and differences between perpendicular bisectors in Euclidean geometry and taxicab geometry.

6. What condition is required for two points to have a taxicab perpendicular bisector?