



math for real

“when will I ever use this?”

(Continued from page 256)

Taxicab Geometry in New York City

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SOLUTIONS

1.–2. Answers will vary, but students should conclude that the length of the shortest path from A to B is 9 miles.

3. The distance is approximately 7.3 miles. Students should conclude that the taxicab distance is always greater than or equal to the ordinary distance.

4. Challenge: To find the taxicab distance, trace paths from A to B using the grid lines.

The taxicab distance from $A(x_1, y_1)$ to

$B(x_2, y_2)$ is $|x_1 - x_2| + |y_1 - y_2|$.

