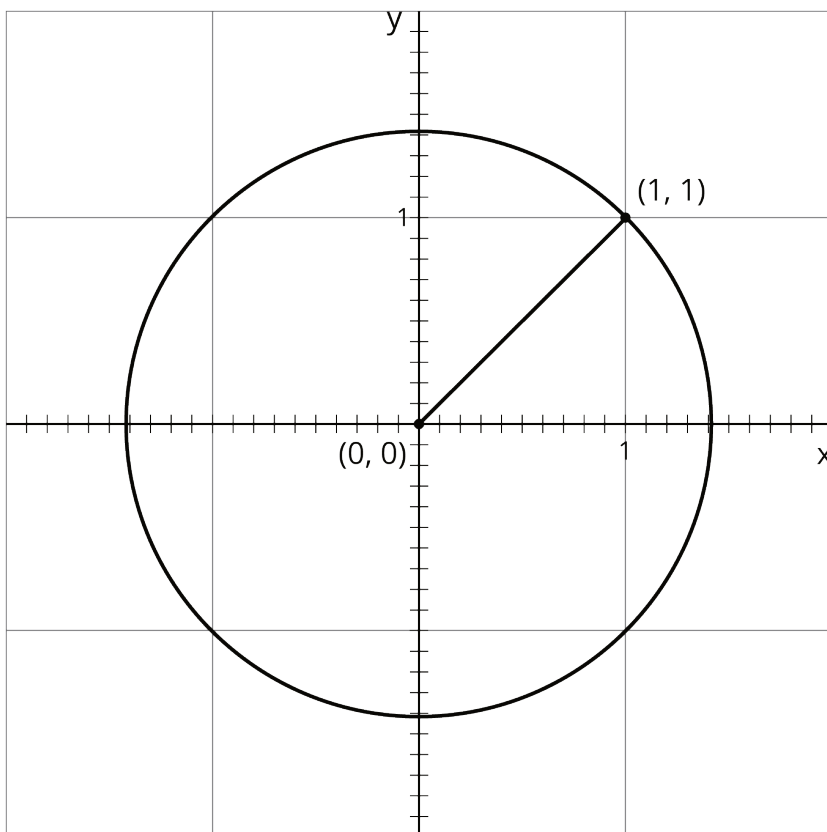# Unit 8 Lesson 4: Square Roots on the Number Line

1 Notice and Wonder: Diagonals (Warm up)
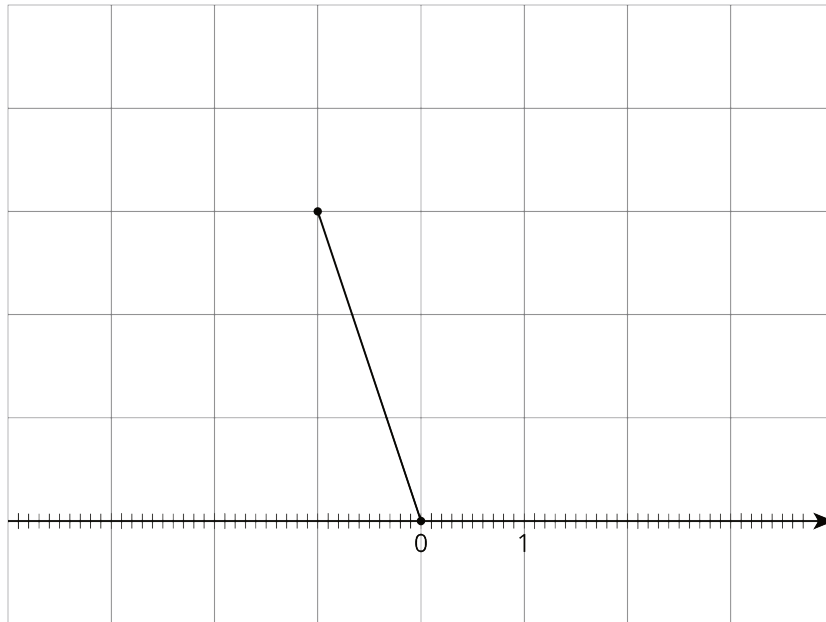
Student Task Statement

What do you notice? What do you wonder?

2 Squaring Lines
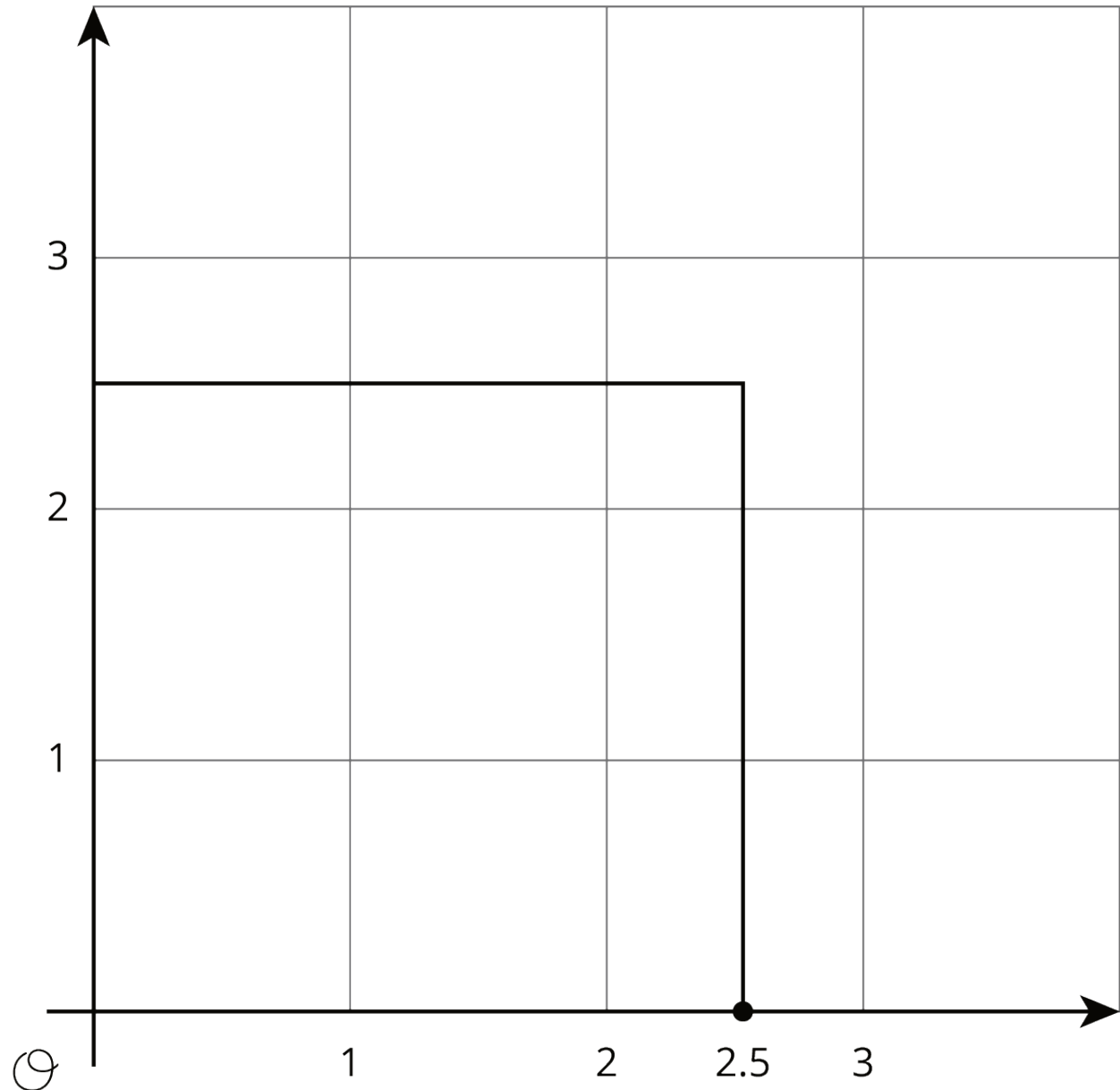
Student Task Statement

1. Estimate the length of the line segment to the nearest tenth of a unit (each grid square is 1 square unit).

2. Find the exact length of the segment.

3 Square Root of 3

Student Task Statement

Diego said that he thinks that $\sqrt{3} \approx 2.5$.

1. Use the square to explain why 2.5 is not a very good approximation for $\sqrt{3}$. Find a point on the number line that is closer to $\sqrt{3}$. Draw a new square on the axes and use it to explain how you know the point you plotted is a good approximation for $\sqrt{3}$.

2. Use the fact that $\sqrt{3}$ is a solution to the equation $x^2 = 3$ to find a decimal approximation of $\sqrt{3}$ whose square is between 2.9 and 3.1.