Unit 5 Lesson 10: How Well Can You Measure?

1 Estimating a Percentage (Warm up)

Student Task Statement

A student got 16 out of 21 questions correct on a quiz. Use mental estimation to answer these questions.

1. Did the student answer less than or more than 80% of the questions correctly?

2. Did the student answer less than or more than 75% of the questions correctly?

# 2 Perimeter of a Square

Student Task Statement

Your teacher will give you a picture of 9 different squares and will assign your group 3 of these squares to examine more closely.

1. For each of your assigned squares, measure the length of the diagonal and the perimeter of the square in centimeters.

   Check your measurements with your group. After you come to an agreement, record your measurements in the table.

	diagonal (cm)	perimeter (cm)
square A		
square B		
square C		
square D		
square E		
square F		
square G		
square H		
square I		

2. Plot the diagonal and perimeter values from the table on the coordinate plane.
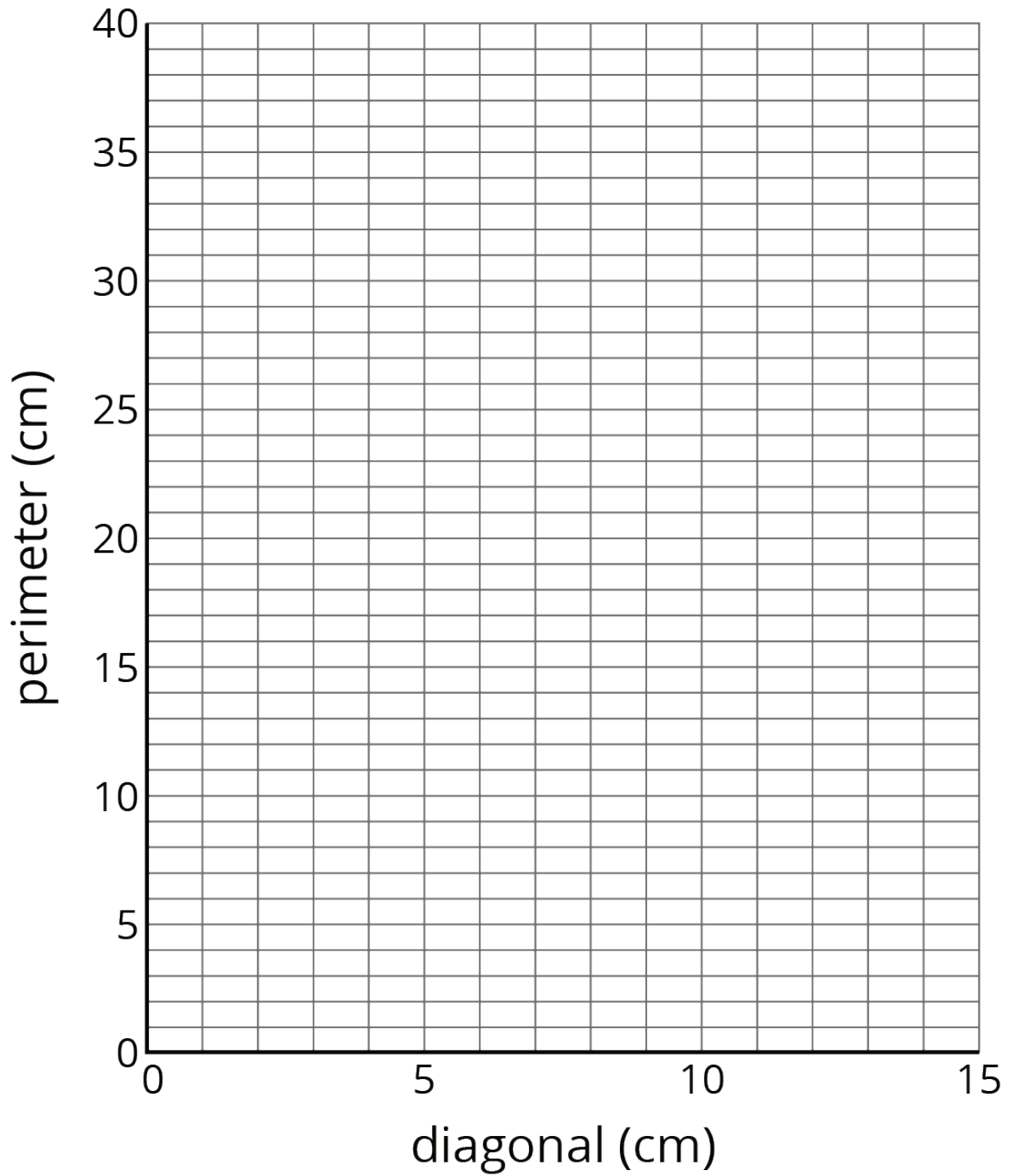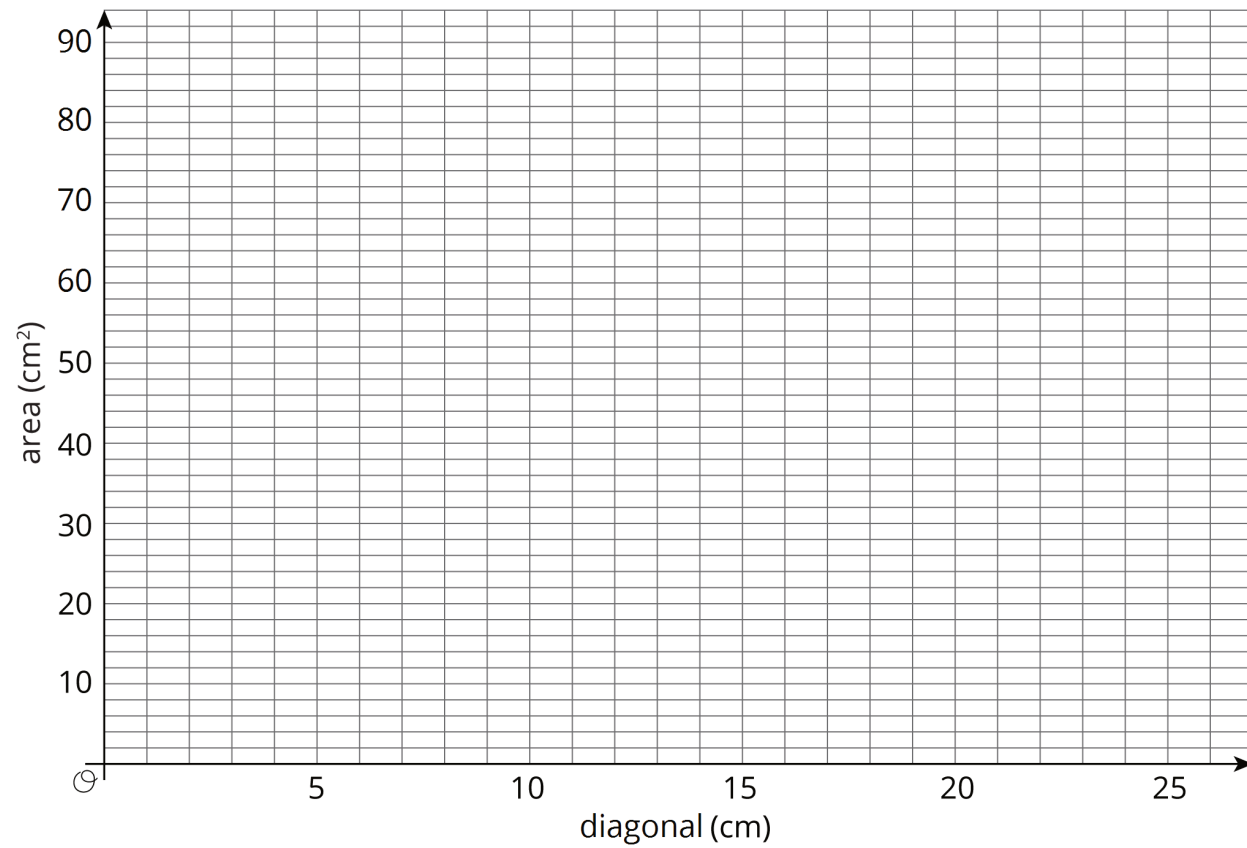

3. What do you notice about the points on the graph?

   Pause here so your teacher can review your work.

4. Record measurements of the other squares to complete your table.

3 Area of a Square

Images for Launch

Student Task Statement

1. In the table, record the length of the diagonal for each of your assigned squares from the previous activity. Next, calculate the area of each of your squares.

	diagonal (cm)	area (cm^2)
square A		
square B		
square C		
square D		
square E		
square F		
square G		
square H		
square I		

Pause here so your teacher can review your work. Be prepared to share your values with the class.

2. Examine the class graph of these values. What do you notice?

3. How is the relationship between the diagonal and area of a square the same as the relationship between the diagonal and perimeter of a square from the previous activity? How is it different?

Activity Synthesis