## Unit 6 Lesson 14: Coordinate Proof <br> 1 Which One Doesn't Belong: Coordinate Quadrilaterals (Warm up)

## Student Task Statement

Which one doesn't belong?


C


B


D


## 2 Name This Quadrilateral

## Student Task Statement

A quadrilateral has vertices $(0,0),(4,3),(13,-9)$, and $(9,-12)$.

1. What type of quadrilateral is it? Explain or show your reasoning.
2. Find the perimeter of this quadrilateral.
3. Find the area of this quadrilateral.

## 3 Circular Logic

## Student Task Statement

The image shows a circle with several points plotted on the circle.


1. What kind of segment is $B C$ in reference to the circle?
2. Choose one of the plotted points on the circle and call it $D$. Each student in the group should choose a different point. Draw segments $B D$ and $D C$. What does the measure of angle $B D C$ appear to be?
3. Calculate the slopes of segments $B D$ and $D C$. What do your results tell you?
4. Compare your results to those of others in your group. What did they find?
5. Based on your group's results, write a conjecture that captures what you are seeing.

## Images for Activity Synthesis

A


B




