Represent Polygons on the Coordinate Plane

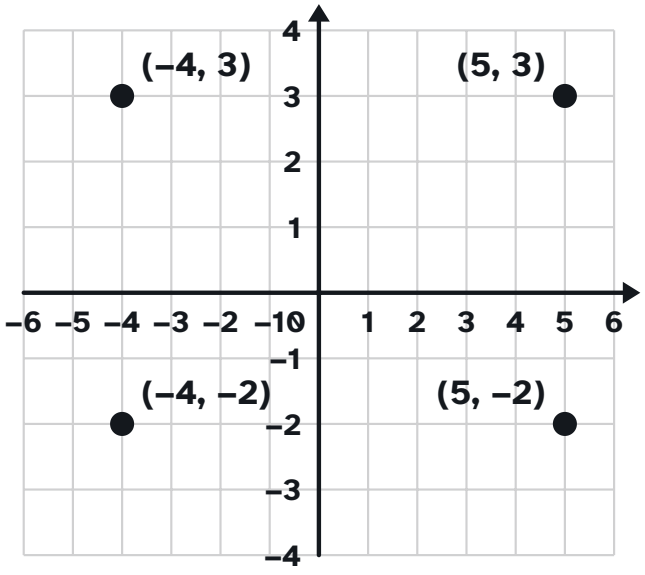
Draw a polygon from its corner coordinates, then find side lengths, perimeter and area.

Name _____ **Date** _____

Tonight's spark

A town plan on a grid shows a garden. Two fence posts sit at (–4, 3) and (5, 3). The fence runs straight between them. How many units long is it?

Make a guess first: is the fence longer than 5 units, or shorter?



Our class model: the shared-coordinate rule

Try it

Work it out on paper. Write one answer on each line.

1 **The vertices (1, 4) and (7, 4) share y = 4. Is the side between them horizontal or vertical?**

A. Horizontal **B.** Vertical **C.** Slanted

My answer _____

2 **Find the length of the side from (2, 3) to (8, 3).**

A. 10 **B.** 6 **C.** 5 **D.** 16

My answer _____

3 **Find the length of the side from (–4, 2) to (3, 2).**

A. 1 **B.** 12 **C.** 7 **D.** 6

My answer _____

4 **Find the length of the side from (5, 3) to (5, –2).**

A. 1 **B.** 3 **C.** 2 **D.** 5

My answer _____

5 **A rectangle is 9 units long and 4 units wide. What is its perimeter?**

A. 13 units **B.** 26 units **C.** 36 units **D.** 18 units

My answer _____

Talk about it

Which vertices share a coordinate? How long is the side between them?

Home mission

Pretend the middle of your table is (0, 0). Let one hand-width be 1 unit. Point to two spots in a straight row: one 3 units left, one 4 units right. How far apart are they? Then try two spots in a straight column.

If we get stuck, ask

- Which coordinate is the same for both points?
- How many units apart are the coordinates that change?
- Did you count carefully across zero?

Do it on a screen

Scan or type the link. Same lesson, with hints.

eduwonderlab.com/lessons/7-7/homework.html

How did it feel? (optional)

Tricky Getting there Got it