Perimeter Detectives

Check the side labels before you add.

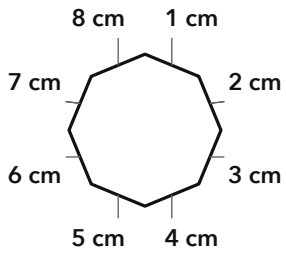
3.GSR.8 "Determine the perimeter of a polygon presented in real-life, mathematical problems."

NAME _____ DATE _____

READY TO FIND

A figure is READY when every outside side has a length. Add each side length one time to find the perimeter.

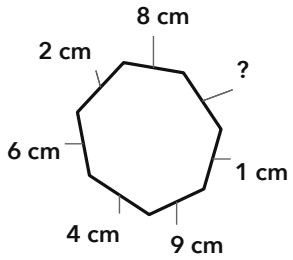
This octagon is READY because every outside side has a length.



NEED MORE INFO

A figure needs MORE INFO when an outside side does not have a length. Do not guess a missing length.

This seven-sided figure needs MORE INFO because one outside side has a question mark.



1 SORT

8 items

For each figure, circle READY or MORE INFO, then choose two figures and explain how the side labels helped you decide.

1.

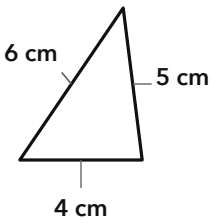


Figure 1

READY MORE INFO

2.

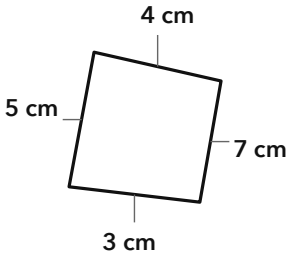


Figure 2

READY MORE INFO

3.

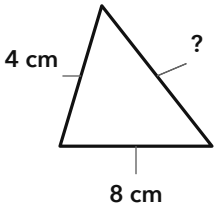


Figure 3

READY MORE INFO

4.

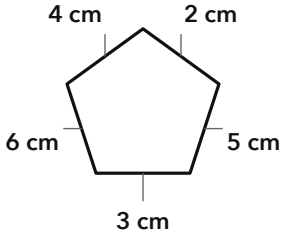


Figure 4

READY MORE INFO

5.

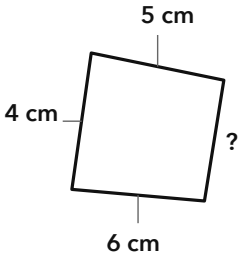


Figure 5

READY MORE INFO

6.

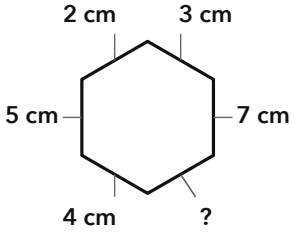


Figure 6

READY MORE INFO

7.

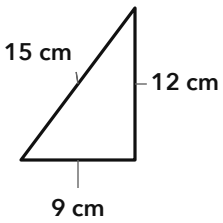


Figure 7

READY MORE INFO

8.

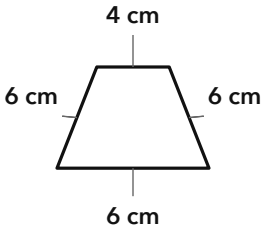


Figure 8

READY MORE INFO

2 PROVE IT

Explain your thinking

Pick two items from Part 1. For each one, tell how you knew where it belonged.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Draw one new polygon for READY and one new polygon for MORE INFO. Label the outside sides to show why each belongs there.

READY

MORE INFO

CHALLENGE

A garden has four outside sides labeled 8 m, 5 m, 8 m, and 5 m. Draw the garden and find its perimeter.

ANSWER KEY

Perimeter Detectives

GRADE 3 · 3.GSR.8

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (triangle)	**READY**	All three outside sides have lengths.
2	Figure 2 (polygon)	**READY**	All four outside sides have lengths.
3	Figure 3 (triangle)	**MORE INFO**	One outside side has no known length.
4	Figure 4 (pentagon)	**READY**	All five outside sides have lengths.
5	Figure 5 (polygon)	**MORE INFO**	One outside side has no known length.
6	Figure 6 (hexagon)	**MORE INFO**	One outside side has no known length.
7	Figure 7 (right_triangle)	**READY**	All three outside sides have lengths.
8	Figure 8 (trapezoid)	**READY**	All four outside sides have lengths.

PART 2 · PROVE IT

Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **READY**: Draw a quadrilateral with outside sides labeled 10 cm, 3 cm, 4 cm, and 8 cm.
- **MORE INFO**: Draw a triangle with two outside sides labeled 6 cm and 9 cm, and label the third side with a question mark.

Challenge: Draw a four-sided figure with sides labeled 8 m, 5 m, 8 m, and 5 m. Its perimeter is 26 m.

READY: Figures 1, 2, 4, 7, and 8. MORE INFO: Figures 3, 5, and 6. For Part 2, students should state whether every outside side has a known length.