Fence the Gardens

A gardener needs to know how much fence goes around each plot.

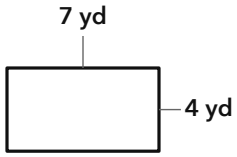
3.M.C.25 "Solve real-world problems involving perimeters of polygons, including finding the perimeter given the side lengths and finding an unknown side length of rectangles."

NAME _____ DATE _____

MATCH OPPOSITE SIDES

A rectangle has two labeled sides that meet at a corner. Each opposite side has the same length, so use each labeled length twice, then add.

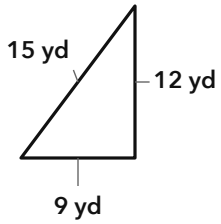
This garden needs $7 + 4 + 7 + 4 = 22$ yd of fence.



ADD EVERY SIDE

Every side of this garden is labeled. Add all the side lengths to find how much fence goes around it.

This garden needs $9 + 12 + 15 = 36$ yd of fence.



1 SORT

8 items

For Part 1, circle PAIR or ADD for each figure; for Part 2, pick one figure from each group and explain how you knew.

1.

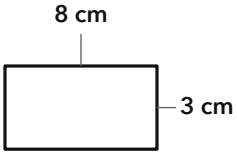


Figure 1

PAIR ADD

2.

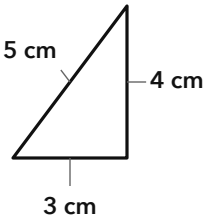


Figure 2

PAIR ADD

3.

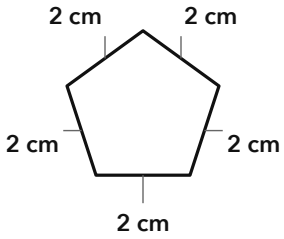


Figure 3

PAIR ADD

4.

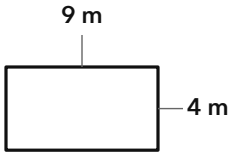


Figure 4

PAIR ADD

5.

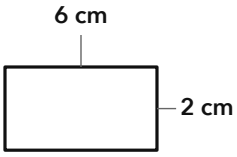


Figure 5

PAIR ADD

6.

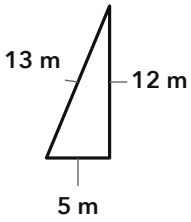


Figure 6

PAIR ADD

7.

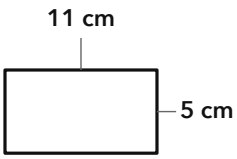


Figure 7

PAIR ADD

8.

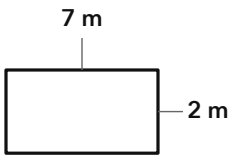


Figure 8

PAIR ADD

2 PROVE IT

Explain your thinking

Pick one figure from each group and explain how you knew.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Draw one new garden for PAIR and one for ADD, label the needed sides, and find how much fence goes around each garden.

PAIR

ADD

CHALLENGE

A rectangular garden needs 34 ft of fence. One side is 7 ft long. How long is a side that touches it? Show how you know.

ANSWER KEY

Fence the Gardens

GRADE 3 · 3.M.C.25

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (rectangle)	**PAIR**	The opposite sides match the labeled sides, so 8 + 3 + 8 + 3 = 22 cm.
2	Figure 2 (right_triangle)	**ADD**	All three sides are labeled, so 3 + 4 + 5 = 12 cm.
3	Figure 3 (pentagon)	**ADD**	All five sides are labeled 2 cm, so the perimeter is 10 cm.
4	Figure 4 (rectangle)	**PAIR**	The opposite sides match the labeled sides, so 9 + 4 + 9 + 4 = 26 m.
5	Figure 5 (rectangle)	**PAIR**	The opposite sides match the labeled sides, so 6 + 2 + 6 + 2 = 16 cm.
6	Figure 6 (right_triangle)	**ADD**	All three sides are labeled, so 5 + 12 + 13 = 30 m.
7	Figure 7 (rectangle)	**PAIR**	The opposite sides match the labeled sides, so 11 + 5 + 11 + 5 = 32 cm.
8	Figure 8 (rectangle)	**PAIR**	The opposite sides match the labeled sides, so 7 + 2 + 7 + 2 = 18 m.

PART 2 · PROVE IT

Task: Pick one figure from each group and explain how you knew.
Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **PAIR**: A rectangle with touching sides labeled 10 ft and 6 ft. Its perimeter is 32 ft.
- **ADD**: A triangle with sides labeled 4 ft, 5 ft, and 6 ft. Its perimeter is 15 ft.

Challenge: Two sides are 7 ft each. The other two sides share 34 - 7 - 7 = 20 ft, so each is 10 ft long.

Part 2 explanations should name the useful clue: a rectangle has matching opposite sides, or every side is labeled. For Part 3, check that each drawing and perimeter agree.