

Space or Edge

Sort measurements of surfaces and boundaries.

3.MG.2 “The student will use multiple representations to estimate and solve problems, including those in context, involving area and perimeter (in both U.S. Customary and metric units). Solve problems, including those in context...”

NAME _____

DATE _____

AREA

Area tells how much flat space a surface covers. Area is measured in square units.

A mural uses 30 square inches of wall space.

PERIMETER

Perimeter tells the distance all the way around a shape. Perimeter is measured in regular units.

A ribbon around a picture frame is 22 centimeters long.

1 SORT _____ 8 items

Circle AREA or PERIMETER for each item, then choose two items and explain how you knew.

- | | | |
|---|----------------------------|---------------------------------|
| 1. The amount of paper covering a bulletin board is 24 square feet. | ☐ AREA | ☐ PERIMETER |
| 2. A rug covers 18 square meters of floor. | ☐ AREA | ☐ PERIMETER |
| 3. The distance around a triangular sign is 15 inches. | ☐ AREA | ☐ PERIMETER |
| 4. A 4-by-5 grid has 20 square tiles. | ☐ AREA | ☐ PERIMETER |
| 5. The length of fencing around a dog pen is 32 feet. | ☐ AREA | ☐ PERIMETER |
| 6. A path goes around a pond for 40 meters. | ☐ AREA | ☐ PERIMETER |
| 7. The top of a desk has 12 square feet of space. | ☐ AREA | ☐ PERIMETER |
| 8. The edge around a hexagon measures 27 centimeters. | ☐ AREA | ☐ PERIMETER |

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

Write one new AREA example and one new PERIMETER example. Use a number and a unit in each.

AREA _____

PERIMETER _____

CHALLENGE

A rectangular patio is 6 meters long and 4 meters wide. Find its area and perimeter. Tell which answer uses square units.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	The amount of paper covering a bulletin board is 24 square feet.	AREA	It measures the surface covered, using square feet.
2	A rug covers 18 square meters of floor.	AREA	It measures covered floor space, using square meters.
3	The distance around a triangular sign is 15 inches.	PERIMETER	It measures the distance around the sign.
4	A 4-by-5 grid has 20 square tiles.	AREA	The square tiles cover the grid's surface.
5	The length of fencing around a dog pen is 32 feet.	PERIMETER	Fencing goes around the outside of the pen.
6	A path goes around a pond for 40 meters.	PERIMETER	It measures a distance around the pond.
7	The top of a desk has 12 square feet of space.	AREA	It measures the flat surface of the desk.
8	The edge around a hexagon measures 27 centimeters.	PERIMETER	It measures the distance around the hexagon.

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)

- **AREA:** A placemat covers 14 square inches.
- **PERIMETER:** The border around a sandbox is 26 feet.

Challenge: Area: 24 square meters. Perimeter: 20 meters. The area answer uses square units.

For Part 2, accept explanations that identify area as surface covered in square units and perimeter as distance around in regular units. The sort answers are 1 AREA, 2 AREA, 3 PERIMETER, 4 AREA, 5 PERIMETER, 6 PERIMETER, 7 AREA, 8 PERIMETER.