

FAMILY MATH

Problem Solving with Perimeter

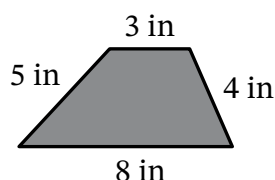
Dear Family,

Your student is learning about another attribute of shapes, perimeter. They find the perimeters of polygons by measuring each side length with a ruler and then adding the side lengths.

Students solve real-world problems involving perimeter. They use what they know about the attributes of different shapes, such as opposite sides of a rectangle are equal in length, to help them solve. Your student discovers that rectangles with different areas can have the same perimeter and that rectangles with different perimeters can have the same area.

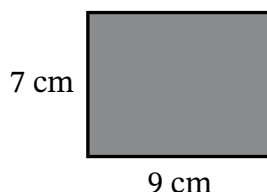
Key Term

perimeter



$$3 + 4 + 8 + 5 = 20$$

Perimeter is the boundary of a shape. The perimeter of this trapezoid is 20 inches.



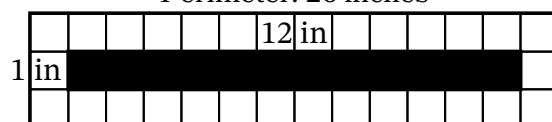
$$(2 \times 7) + (2 \times 9) = 14 + 18 = 32$$

Opposite sides of a rectangle are equal in length. Multiply the length and width by 2 and add the results to find the perimeter.

The perimeter of this rectangle is 32 centimeters.

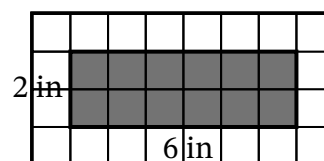
Area: 12 square inches

Perimeter: 26 inches



Area: 12 square inches

Perimeter: 16 inches



The areas of the rectangles are the same because each rectangle has the same total number of square inches. The perimeters are different because the square inches are arranged differently, so the rectangles have different side lengths.

At-Home Activities

Perimeters of Polygons

Help your student measure the sides of different objects, such as pictures or windows. You can use objects such as shoes, sticky notes, or paperclips as measurement tools (e.g., “This wall is 12 shoes long” or “The TV is 40 paperclips long”). Consider asking your student to draw the object and label the side lengths with the measurements. Next, ask your student to find the perimeter. Start with objects that are rectangular. For an added challenge, look for other shapes.

Perimeter Game

Play a game with your student to determine that different rectangles can have the same perimeter. Choose an even two-digit number with a unit, such as 16 cm, to be the perimeter. Then ask your student to give the length and width of a rectangle with that perimeter, such as 7 cm by 1 cm, so $7 + 7 + 1 + 1 = 16$. See if you can give the length and width of a different rectangle with the same perimeter, such as 6 cm by 2 cm, so $6 + 6 + 2 + 2 = 16$. Continue taking turns until you can't think of any more rectangles with the chosen perimeter.