

Shape Measure Mission

Find area and perimeter for triangles and parallelograms.

GRADE 6 • 6.MG.2.b

6.MG.2.b "Solve problems, including those in context, involving the perimeter and area of triangles and parallelograms."

NAME _____

DATE _____

MEASURE THE SHAPE

Area measures the space inside a shape. For a triangle, $A = b \times h / 2$. For a parallelogram, $A = b \times h$. Perimeter measures the distance around a shape, so add all side lengths.

WORKED EXAMPLE

Find the area of a parallelogram with a base of 17 units and a height of 6 units.

1. Use $A = b \times h$.
2. $A = 17 \times 6$.
3. $A = 102$ square units.

Answer: 102 square units

PRACTICE 6 problems

- 1** Find the area of a triangle with a base of 12 cm and a height of 9 cm.

ANSWER _____

- 2** A parallelogram has a base of 14 m and a side length of 8 m. Find its perimeter.

ANSWER _____

- 3** Find the area of a parallelogram with a base of 11 in. and a height of 7 in.

ANSWER _____

- 4** A triangle has side lengths of 10 ft, 13 ft, and 15 ft. Find its perimeter.

ANSWER _____

- 5** Find the area of a triangle with a base of 16 yd and a height of 5 yd.

ANSWER _____

- 6** A parallelogram has a base of 9 cm and a side length of 6 cm. Find its perimeter.

ANSWER _____

APPLY IT Show your work

- 1** The art club is painting a triangular design on a wall for the school play. The design has a base of 18 ft and a height of 10 ft. How much wall space will the design cover?

WORK SPACE

ANSWER _____

- 2** A robotics team makes a parallelogram-shaped banner. Its base is 15 in., and each slanted side is 9 in. How much ribbon is needed to go around the edge of the banner?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A parallelogram has an area of 96 square in. and a height of 8 in. Its side length is 11 in. Find the base, then find the perimeter.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Find the area of a triangle with a base of 12 cm and a height of 9 cm.	54 square cm
2	A parallelogram has a base of 14 m and a side length of 8 m. Find its perimeter.	44 m
3	Find the area of a parallelogram with a base of 11 in. and a height of 7 in.	77 square in.
4	A triangle has side lengths of 10 ft, 13 ft, and 15 ft. Find its perimeter.	38 ft
5	Find the area of a triangle with a base of 16 yd and a height of 5 yd.	40 square yd
6	A parallelogram has a base of 9 cm and a side length of 6 cm. Find its perimeter.	30 cm

PART 2 • APPLY IT

1. **90 square ft** Use the triangle area formula: $18 \times 10 / 2 = 90$. The design covers 90 square feet.
2. **48 in.** Add the four side lengths: $15 + 9 + 15 + 9 = 48$. The team needs 48 inches of ribbon.

CHALLENGE

Base = 12 in.; perimeter = 46 in.

Accept equivalent unit wording, such as square centimeters for square cm. For the challenge, students should find the base by dividing 96 by 8 before finding the perimeter.