

Grade 4 • Unit 8 Worksheet

Properties of Two-dimensional Shapes

Name: _____

Date: _____

Part A • Classifying Triangles

1. A RIGHT triangle has one 90° angle. An ACUTE triangle has all three angles less than 90° . An OBTUSE triangle has one angle bigger than 90° .

Can a triangle have TWO right angles? Why or why not?

Can a triangle have one obtuse angle AND one right angle? Why or why not?

2. Sketch one example of EACH:

An acute triangle:

A right triangle:

An obtuse triangle:

Part B • Classifying Quadrilaterals

3. From this list (square, rectangle, rhombus, parallelogram, trapezoid), list ALL quadrilaterals with each PROPERTY.

Has 4 right angles:

Has 4 sides of equal length:

Has TWO PAIRS of parallel sides:

Has AT LEAST one pair of parallel sides:

4. Mai says, "A square IS a rectangle." Lin says, "No, they're different shapes." Who is correct? Explain.

5. TRUE or FALSE? 'Every rhombus is a square.' Explain.

TRUE / FALSE

Part C • Symmetry

6. How many LINES OF SYMMETRY does each have? Draw them.

An equilateral triangle: _____ lines

A square: _____ lines

The letter A (capital): _____ lines

The letter S (capital): _____ lines

7. Diego says, "Every rectangle has 4 lines of symmetry, just like a square." Is Diego right? Explain.

Part D • Perimeter and Side Lengths

8. A rectangle has a perimeter of 36 cm. One side is 10 cm. Find the other side length.
Show your work:

Other side: _____ cm

9. A rhombus has perimeter 28 inches. What is the length of each side? Explain.

Each side: _____ in

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10. An isosceles triangle has perimeter 24 cm. The third (base) side is 8 cm. How long are the two equal sides?

Show your work:

Each equal side: _____ cm

Part E • Reasoning and Error Analysis

11. Pat draws a quadrilateral with one pair of parallel sides and one pair of perpendicular sides. Could it be a rectangle? Why or why not?

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12. Sara claims: "If a shape has a line of symmetry, it must be a polygon with all sides equal." Find a SHAPE that shows Sara is wrong.
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