

Grade 5 · Classifying Two-Dimensional Figures

· Worksheet

Common Core 5.G.B.3, 5.G.B.4 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

These 24 problems practice classifying two-dimensional figures (5.G.B.3 and 5.G.B.4). You will sort triangles by sides and angles, name quadrilaterals from their attributes, and use the hierarchy from trapezoid to square.

The last problems ask you to decide whether statements are true, name every category that fits, and find counterexamples. Look for tick marks, arrows, and square corners in each figure.

Grade 5 Common Core: 5.G.B.3 · 5.G.B.4

Problem 1: Triangle by sides A

A triangle has sides of 5 inches, 5 inches, and 8 inches. Classify it by its sides.

Problem 2: Triangle by sides B

A triangle has three sides that each measure 6 centimeters. Classify it by its sides. Is it also isosceles?

Problem 3: Triangle by sides C

A triangle has sides of 7 feet, 9 feet, and 11 feet. Classify it by its sides.

Problem 4: Triangle by angles A

The angles of a triangle measure 90° , 35° , and 55° . Classify it by its angles.

Problem 5: Triangle by angles B

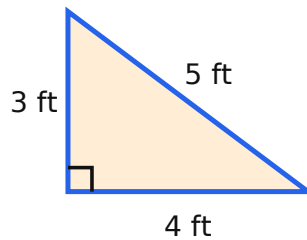
The angles of a triangle measure 40° , 100° , and 40° . Classify it by its angles and by its sides.

Problem 6: Triangle by angles C

The angles of a triangle measure 60° , 70° , and 50° . Classify it by its angles.

Problem 7: Classify both ways

Classify triangle T by its sides and by its angles.



Triangle T

Triangle T.

Problem 8: Parallelogram facts

Figure P has the arrow marks shown. How many pairs of parallel sides does it have? Name the figure. Find the lengths of the bottom and left sides, and the perimeter.

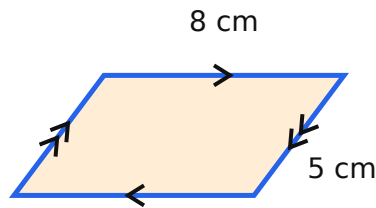


Figure P

Figure P.

Problem 9: Square or not

A quadrilateral has four equal sides and four right angles. What is its most specific name?

Problem 10: Rectangle riddle

A quadrilateral has opposite sides parallel, four right angles, and side lengths of 8 inches and 3 inches. Name it.

Problem 11: One pair of parallel sides

Figure Q has one pair of parallel sides marked. Name the figure. Is it a parallelogram? Explain.

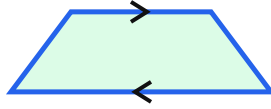


Figure Q

Figure Q.

Problem 12: Name the leaning shape

Figure R has four equal sides marked. Its opposite sides are parallel and it has no right angles. Name it and explain why it is not a square.

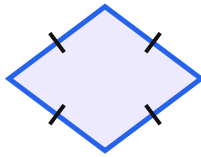


Figure R

Figure R.

Problem 13: Squares and rectangles

True or false: Every square is a rectangle. Explain.

Problem 14: Rectangles and squares

True or false: Every rectangle is a square. If false, give a counterexample.

Problem 15: Rhombus and parallelogram

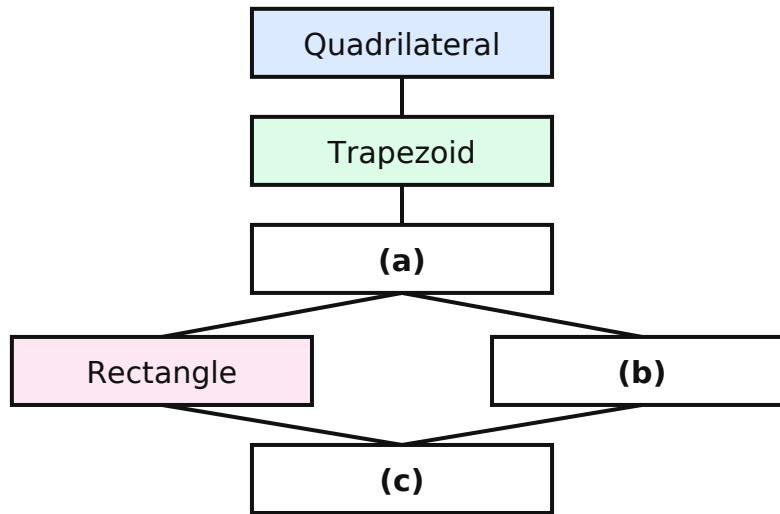
True or false: Every rhombus is a parallelogram. Explain.

Problem 16: Shared attributes

Rectangles belong to the category of parallelograms. Name two attributes of all parallelograms that every rectangle also has.

Problem 17: Complete the hierarchy

Write the shape that belongs in each empty box of the diagram.



Fill in the three empty boxes.

Problem 18: Name from measures

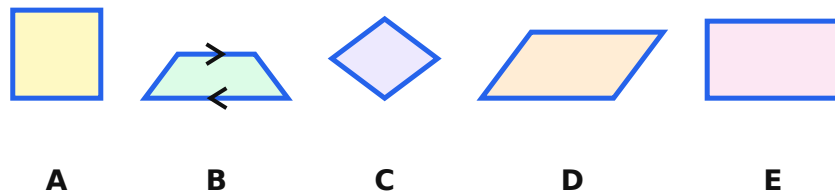
A quadrilateral has four sides of 5 inches each and angles of 70° , 110° , 70° , and 110° . Opposite sides are parallel. Name it.

Problem 19: Pizza box top

The top of Maya's pizza box is a 12-inch by 12-inch quadrilateral with four right angles. List every name that fits: quadrilateral, trapezoid, parallelogram, rectangle, rhombus, square.

Problem 20: Sort the shapes

Use the shapes. Which are parallelograms? Which are rectangles? Which is a trapezoid but not a parallelogram?



Shapes A to E.

Problem 21: Counterexample

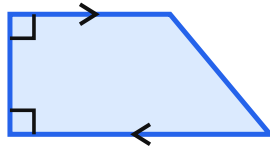
Ethan says, "Every quadrilateral with four equal sides is a square." Name a shape that shows he is wrong and explain.

Problem 22: Riddles

Name each shape. (a) I have 4 sides, opposite sides are parallel, all sides are equal, and I have no right angles. (b) I am a rectangle, and all my sides are equal.

Problem 23: Diego's quadrilateral

Diego draws the figure shown. It has exactly one pair of parallel sides and two right angles. Name it. Is it a rectangle? Explain.



Diego's figure

Diego's figure.

Problem 24: Triangle categories

True or false: Every equilateral triangle is isosceles. Explain.