Classify Polygons

Attributes and Shape Families

Compare, investigate and explain



Inclusive definitions and inherited attributes

Original figures and complete worked keys

26 pages | 32 multi-part items | Grade 5

TOUCHSTONE STANDARDS

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Grade 5 Classify Polygons

Georgia's K-12 Mathematics Standards

5.GSR.8.1

Classify, compare, and contrast polygons based on properties.

5.GSR.8.2

Determine, through exploration and investigation, that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.

Common Core crosswalk: written to Georgia's standards, these pages also practice 5.G.B.3 and 5.G.B.4 (classifying with provided family diagrams).

Page map: practice / key

3 / 15	Classify Triangles	5.GSR.8.1
4 / 16	Quadrilateral Attributes	5.GSR.8.1
5 / 17	More Than One Family	5.GSR.8.1
6 / 18	Regular and Irregular Polygons	5.GSR.8.1
7 / 19	Compare Two Polygons	5.GSR.8.1
8 / 20	Shape Families Share Attributes	5.GSR.8.1 / 8.2
9 / 21	From a Family to Its Members	5.GSR.8.1 / 8.2
10 / 22	Test a Family Claim	5.GSR.8.1 / 8.2
11 / 23	Symmetry and Same Size	5.GSR.8.1
12 / 24	Sort the Craft Cutouts	5.GSR.8.1 / 8.2
13 / 25	Shape Code	5.GSR.8.1
14 / 26	Mixed Review	5.GSR.8.1 / 8.2

Inclusive families

32 multi-part items and 12 worked examples. A trapezoid has at least one parallel pair. A kite has two adjacent equal-side pairs; the pair lengths may match. Squares also fit rectangle, rhombus, parallelogram, trapezoid, kite and quadrilateral. Equilateral triangles also fit isosceles.

Marks and tools

All repeated side lengths within each figure have matching ticks. Ticks compare sides within one figure only; congruence tasks omit them. Every right corner has a square. All drawings share one scale; trace or use a ruler to compare size/shape. Regular means all sides AND all angles equal.

Explore the families

Students use supplied diagrams; arrows mean child is also parent. They never build a hierarchy. Parent definitions justify guaranteed attributes; examples alone do not prove always. Figures are convex; no solids, volume or angle-sum equations. Page 13 spells SORT; extra lookup 6 = A.

Follow Touchstone Standards on TPT for new resources. After using the packet, an honest review helps us improve.

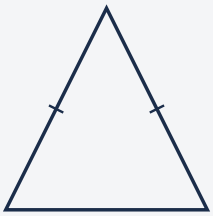
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Classify Triangles

Name: _____

Use Triangle Facts. Write the most specific side name and the angle name.

Strategy Spotlight



Isosceles; acute.

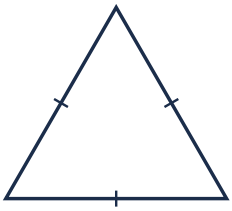
2 equal sides.

Angles: acute.

Triangle Facts

Scalene: no equal sides.
Isosceles: at least two equal sides.
Equilateral: three equal sides.
Acute: three acute angles.
Right: one right angle.
Obtuse: one obtuse angle.

1.



Side name:

Angle name:

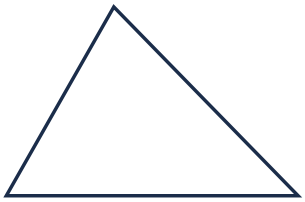
2.



Side name:

Angle name:

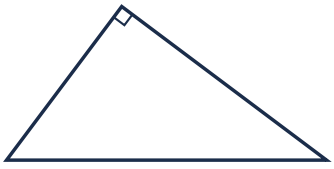
3.



Side name:

Angle name:

4.



Side name:

Angle name:

Matching ticks compare sides within each figure.

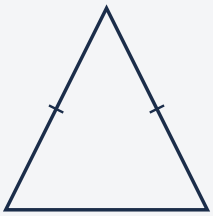
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Answer Key: Classify Triangles

Student page 3

Use Triangle Facts. Write the most specific side name and the angle name.

Strategy Spotlight



Isosceles; acute.

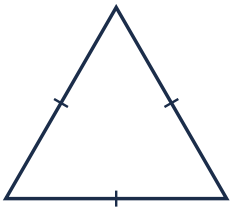
2 equal sides.

Angles: acute.

Triangle Facts

Scalene: no equal sides.
Isosceles: at least two equal sides.
Equilateral: three equal sides.
Acute: three acute angles.
Right: one right angle.
Obtuse: one obtuse angle.

1.



3 equal sides.
Angles: acute.
Also isosceles.

Side name:

Equilateral

Angle name:

Acute

2.



2 equal sides.
Angles: obtuse.

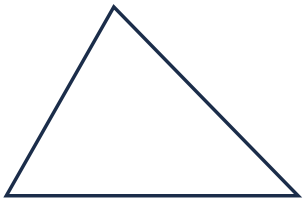
Side name:

Isosceles

Angle name:

Obtuse

3.



No equal sides.
Angles: acute.

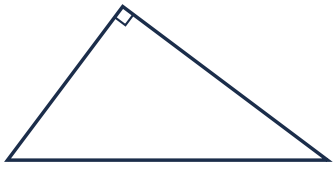
Side name:

Scalene

Angle name:

Acute

4.



No equal sides.
Angles: right.

Side name:

Scalene

Angle name:

Right

Matching ticks compare sides within each figure.

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Shape Families Share Attributes

Name: _____

Use the provided diagram and parent facts. Find the shared family and explain the guarantee.

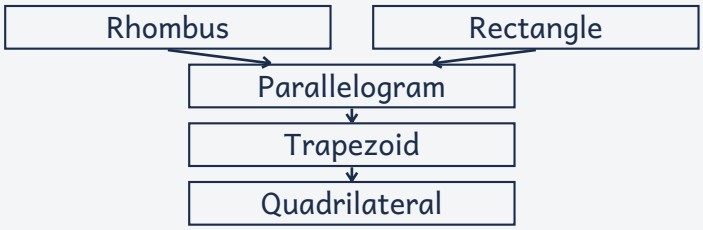
Strategy Spotlight

Start with a rhombus.

Its opposite sides are parallel.

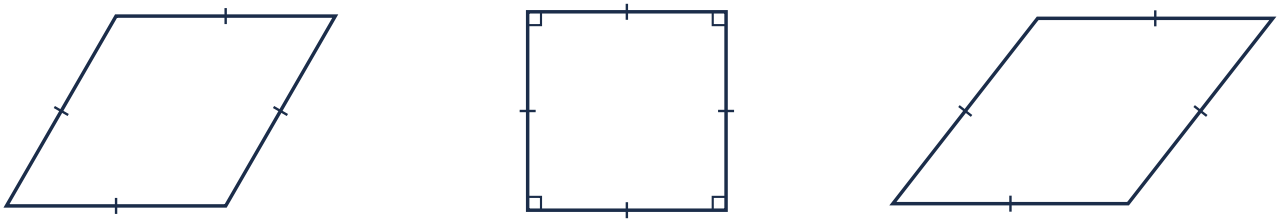
It is also a parallelogram.

Arrows mean "is also".



17.

Parent: Parallelogram. Count parallel pairs (exactly).

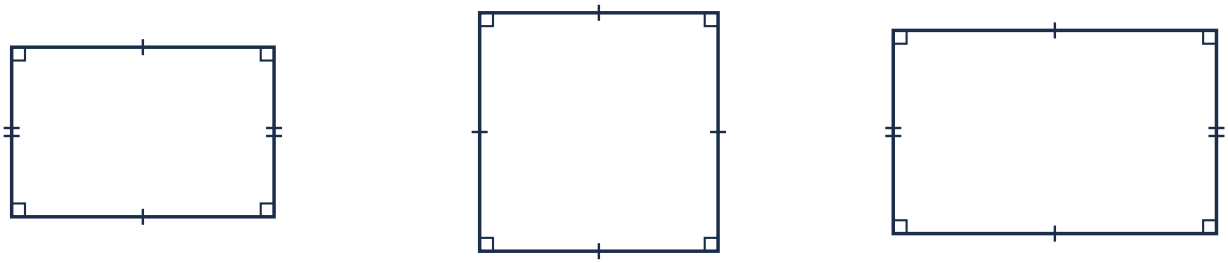


A **B** **C**

Common family: _____ exactly: _____

18.

Parent: Trapezoid. Count parallel pairs (at least).



A **B** **C**

Common family: _____ at least: _____

Matching ticks compare sides within each figure.

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Answer Key: Shape Families Share Attributes

Student page 8

Use the provided diagram and parent facts. Find the shared family and explain the guarantee.

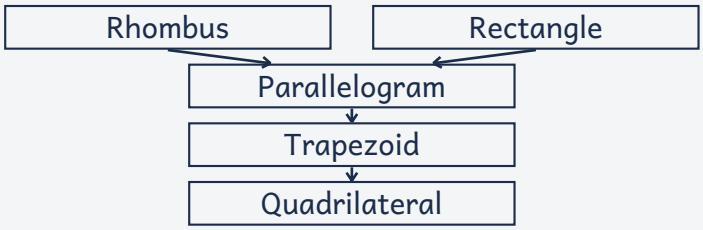
Strategy Spotlight

Start with a rhombus.

Its opposite sides are parallel.

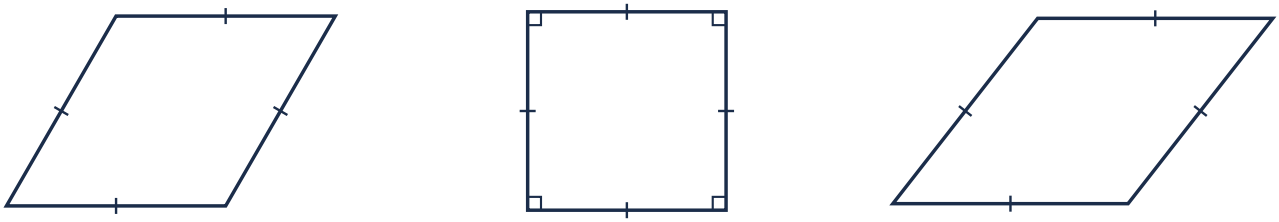
It is also a parallelogram.

Arrows mean "is also".



17.

Parent: Parallelogram. Count parallel pairs (exactly).



A **B** **C**

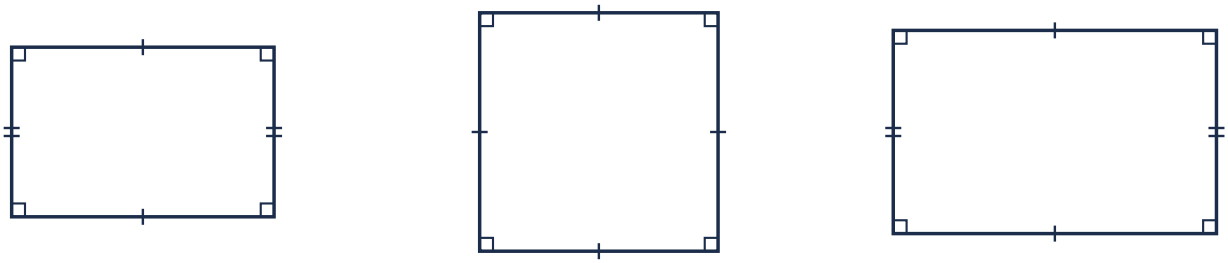
Common family: **Rhombus** exactly: **2**

Rhombus: 4 equal sides; also a Parallelogram.

Parent guarantees exactly 2 parallel pairs.

18.

Parent: Trapezoid. Count parallel pairs (at least).



A **B** **C**

Common family: **Rectangle** at least: **1**

Rectangle: 4 right corners; also a Trapezoid.

Parent guarantees at least 1 parallel pair.

Matching ticks compare sides within each figure.

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