



Lesson 30

Classify Two-Dimensional Figures

Solve the problems.

Name: _____

1

Look at the flow chart below.

Triangle

Isosceles

Equilateral

Which statement is true? Circle the letter of all that apply.

A

 Equilateral triangles can be classified as isosceles triangles.
B Isosceles triangles have all the properties that equilateral triangles have.
C Isosceles triangles can be classified as equilateral triangles.
D Equilateral triangles have all the properties that isosceles triangles have.

Which is the most general category? The most specific?

2

Create a Venn diagram to show the hierarchy of triangles, quadrilaterals, isosceles triangles, and polygons.

Possible diagram:

Triangles

Isosceles Triangles

Polygons

Quadrilaterals

In a Venn diagram, categories with nothing in common do not overlap.

3

Use the diagram in problem 2. Write two different statements that describe the relationships between the shapes.

Solution: Answers will vary. Possible answer: Isosceles triangles have all the properties that triangles have. All triangles and quadrilaterals are polygons.

Which shapes share properties?

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Solve.

4

Look at the tree diagram below.

Polygons

Triangles

Quadrilaterals

Trapezoids

Pentagons

Which statement is true? Circle the letter of the correct answer.

A

 All polygons are triangles, quadrilaterals, and pentagons.
B All quadrilaterals are trapezoids.
C All triangles and quadrilaterals are polygons.
D Triangles, quadrilaterals, and pentagons all have the same properties.
Dina chose B as the correct answer. How did she get that answer?

Possible answer: Dina thought that the categories at the bottom of the diagram are the more general ones. It's just the opposite. All trapezoids are quadrilaterals.

The most general category is at the top of the tree diagram.

5

Chen wrote some names that can be used to classify this shape in order from LEAST specific to MOST specific. quadrilateral, parallelogram, square, rhombus. Do you agree with what he did? Explain.

Solution: Answers will vary. Possible answer: No, the shape does not have all the properties of a square (4 right angles), so square should not be in the hierarchy.

Remember the marks on the shape mean all the sides are the same length.

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Practice and Problem Solving

Unit 5 Geometry

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