Classifying Triangles Worksheet

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Part 1: Building a Foundation

What is the sum of the internal angles in any triangle?

Hint: Think about the properties of triangles.

- ◯ 90 degrees
- ◯ 180 degrees
- ◯ 270 degrees
- ◯ 360 degrees

Which of the following are characteristics of an equilateral triangle?

Hint: Consider the properties of equal sides and angles.

- ☐ All sides are equal
- ☐ All angles are 60 degrees
- ☐ Two sides are equal
- ☐ One angle is 90 degrees

Describe the difference between an isosceles triangle and a scalene triangle.

Hint: Think about the equality of sides.

List the three types of triangles classified by their angles.

Hint: Consider the measures of the angles.

1. Type 1

2. Type 2

3. Type 3

Part 2: comprehension and Application

Which type of triangle has one angle greater than 90 degrees?

Hint: Think about the definitions of triangle types.

- ◯ Acute
- ◯ Right
- ◯ Obtuse
- ◯ Equilateral

Identify the triangles that can have at least two equal sides.

Hint: Consider the definitions of triangle types.

- ☐ Equilateral
- ☐ Isosceles
- ☐ Scalene
- ☐ Right

Given a triangle with angles 50 degrees and 60 degrees, calculate the measure of the third angle and classify the triangle by its angles.

Hint: Use the property of the sum of angles in a triangle.

If a triangle has sides measuring 5 cm, 5 cm, and 8 cm, what type of triangle is it based on its sides?

Hint: Consider the equality of the sides.

- ◯ Equilateral
- ◯ Isosceles
- ◯ Scalene
- ◯ Right

Part 3: Analysis, Evaluation, and Creation

Which of the following statements is true about scalene triangles?

Hint: Think about the properties of scalene triangles.

- ◯ They have at least two equal sides.
- ◯ All angles are equal.
- ◯ All sides and angles are different.
- ◯ They have one right angle.

Evaluate the following scenarios and determine which could form a valid triangle.

Hint: Consider the triangle inequality theorem.

- ☐ Sides measuring 3 cm, 4 cm, and 5 cm
- ☐ Angles measuring 60 degrees, 60 degrees, and 60 degrees
- ☐ Sides measuring 2 cm, 2 cm, and 5 cm
- ☐ Angles measuring 90 degrees, 45 degrees, and 45 degrees

Create a real-world problem involving a triangle, describe the scenario, and explain how you would solve it using triangle properties.

Hint: Think about practical applications of triangles.

Analyze how the properties of an isosceles triangle can be used to find missing angles when two angles are known.

Hint: Consider the properties of equal angles in isosceles triangles.