Triangles

A. Choose the correct answer:

1. A triangle has how many sides?

a) 2 b) 3

c) 4 d) 5

2. The sum of the interior angles of a triangle is

a) 360° b) 180°

c) 90° d) 270°

3. A triangle with all sides equal is called

a) isosceles triangle b) scalene triangle

c) equilateral triangle d) right-angled triangle

4. A triangle in which one angle is more than 90° is called

a) acute triangle b) obtuse triangle

c) right triangle d) equilateral triangle

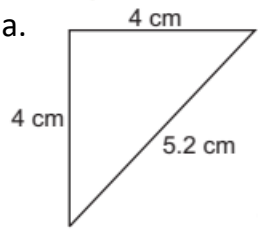
5. If one angle of a triangle is 90°, the triangle is

a) acute b) obtuse

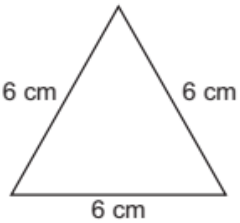
c) right-angled d) equilateral

B. Classify the triangles shown below as scalene, isosceles or equilateral. The length of the sides are given.

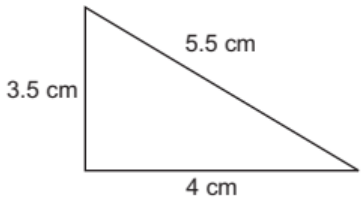
a.



b.



c.



C. Write the Missing Terms to Complete the Sentences:

1. A triangle has _____ sides and _____ angles.

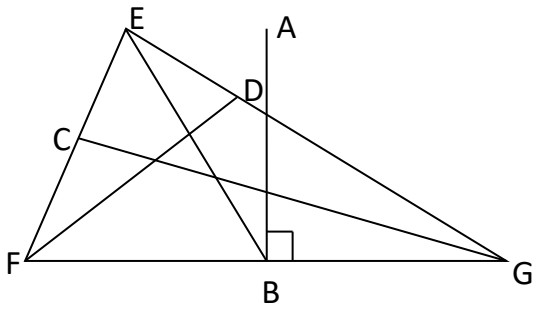
2. The triangle with no equal sides is called a _____ triangle.

3. In an equilateral triangle, each angle measures _____.

4. The angle sum property of a triangle states that the sum of all interior angles is _____.

5. A triangle with two equal sides is called _____ triangle.

D. Use the diagram to answer the questions.



A. Name an angle bisector of ΔEFG.

B. Name a median in ΔEFG.

C. Name a perpendicular bisector in ΔEFG.

D. Name an altitude in Δ EFG.

E. Mark each sentence with a True (✔) or False (✗):

1. The sum of angles in any triangle is always 180°. _____
2. A scalene triangle has all angles equal. _____
3. An obtuse triangle can have two obtuse angles. _____
4. Every equilateral triangle is also an isosceles triangle. _____
5. A triangle can have two right angles. _____

F. Figure out the answers to these questions:

1. Name the types of triangles based on sides and angles.
2. Draw and label an isosceles triangle and mention the measures of its sides and angles.
3. If two angles of a triangle are 45° and 60°, find the third angle.
4. Can a triangle have angles 100°, 40°, and 50°? Give reason.
5. Construct a triangle having sides 5 cm, 6 cm, and 7 cm. Classify it.

G. Challenge yourself with these questions:

1. Draw all three types of triangles based on angles.
2. Find the third angle of a triangle whose two angles are 35° and 65°.
3. A triangle has angles 90°, 45°, and 45°. Name the triangle and explain.
4. Measure and classify the triangle formed by points A(0,0), B(4,0), and C(2,3).
5. Construct a triangle where one angle is 90° and the other two are equal.