

Classifying Triangles - Practice Worksheet

Name: _____ Date: _____

Instructions: Classify each triangle in TWO ways: first by its sides (equilateral, isosceles, or scalene), then by its angles (acute, right, or obtuse). Write both answers for each problem.

1. A triangle has sides of 5 cm, 5 cm, and 5 cm. Classify it by sides and by angles.
.....
2. A triangle has sides of 6 cm, 6 cm, and 4 cm, and all angles are less than 90 deg. Classify it by sides and by angles.
.....
3. A triangle has sides of 3 cm, 4 cm, and 5 cm, and one angle measures exactly 90 deg. Classify it by sides and by angles.
.....
4. A triangle has angles of 60 deg, 60 deg, and 60 deg. Classify it by sides and by angles.
.....
5. A triangle has angles of 90 deg, 45 deg, and 45 deg, with two equal sides. Classify it by sides and by angles.
.....
6. A triangle has angles of 110 deg, 40 deg, and 30 deg, with no equal sides. Classify it by sides and by angles.
.....
7. A triangle has sides of 7 cm, 7 cm, and 10 cm, and one angle measures 100 deg. Classify it by sides and by angles.
.....
8. A triangle has sides of 8 cm, 15 cm, and 17 cm, and one angle is 90 deg. Classify it by sides and by angles.
.....
9. Can a triangle be both equilateral and obtuse? Explain why or why not.
.....
10. A triangle has angles of 35 deg, 65 deg, and 80 deg, with sides of 9 cm, 13 cm, and 15 cm. Classify it by sides and by angles.
.....

Answer Key

1. Equilateral (sides); Acute (angles)
2. Isosceles (sides); Acute (angles)
3. Scalene (sides); Right (angles)
4. Equilateral (sides); Acute (angles)
5. Isosceles (sides); Right (angles)
6. Scalene (sides); Obtuse (angles)
7. Isosceles (sides); Obtuse (angles)

8. Scalene (sides); Right (angles)

9. No. An equilateral triangle always has three 60 deg angles, so all angles are acute. An obtuse triangle requires one angle greater than 90 deg, which is impossible if all three angles are 60 deg.

10. Scalene (sides); Acute (angles)