

Classifying triangles – equilateral, isosceles and scalene

WHAT THIS LESSON TEACHES

Sort a triangle by how many of its sides match. All three sides equal is equilateral; exactly two sides equal is isosceles; no two sides equal is scalene.

→ A yield road sign has all three sides the same length, so it is equilateral.

→ A set square with three different side lengths is scalene, whichever way you turn it.

MODEL THIS ON THE BOARD

NAMING A TRIANGLE BY ITS SIDES

- 1 A paper triangle has sides of **7 cm, 7 cm and 7 cm**.
- 2 Compare the sides: all **three** are the same length.
- 3 A triangle with all three sides equal is **equilateral**.

DISCUSSION STARTER

REFLECT What do you check first to name a triangle — equal sides or equal angles?

ANSWER KEY

- a) 5 cm, 5 cm, 5 cm: equilateral
 b) 6 cm, 6 cm, 4 cm: isosceles
 c) 7 cm, 5 cm, 3 cm: scalene
 d) 8 cm, 8 cm, 8 cm: equilateral
 e) 9 cm, 6 cm, 9 cm: isosceles
 f) 10 cm, 7 cm, 4 cm: scalene

Q1: equilateral

Q2: isosceles

Q3: scalene

Q4: equilateral

a) Always — Three equal sides is the exact rule for the equilateral family.

b) Never — Scalene means no two sides match, so it can never have a matching pair.

c) Always — By definition an isosceles triangle has one matching pair of sides.

d) Sometimes — A triangle is equilateral only when all three sides happen to be equal.

EXTENSION SHEET · STRETCH ANSWERS

S1: a regular pentagon

S2: a regular hexagon

S3: a rhombus

S4: a rhombus

S5: an isosceles trapezium