

I have an isosceles triangle.
One angle measures 42 degrees.

What could the other angles measure?

The angles could be:
 $42^\circ, 42^\circ, 96^\circ$
or
 $42^\circ, 69^\circ, 69^\circ$

Shania



My angles are $70^\circ, 70^\circ$ and 40°

Harrison



My angles are $45^\circ, 45^\circ$ and 90°

Lucy

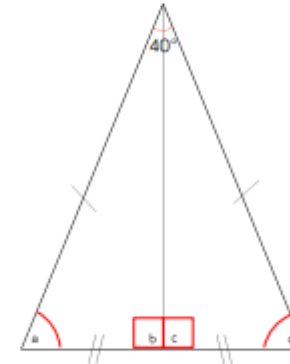


My angles are $60^\circ, 60^\circ$ and 60°

What type of triangle is each person describing?
Explain how you know.

Shania is describing an isosceles triangle.
Harrison is describing an isosceles right-angled triangle.
Lucy is describing an equilateral triangle.

How many sentences can you write to express the relationships between the angles in the triangles?
One has been done for you.



$$40^\circ + a + d = 180^\circ$$

Possible responses:

$$20^\circ + a + b = 180^\circ$$

$$20^\circ + c + d = 180^\circ$$

$$b = 90^\circ$$

$$c = 90^\circ$$

$$b = c$$

$$a = d$$

etc.

Children could also work out the value of each angle.

Here are the values of the angles:

$$a = 70^\circ$$

$$b = 90^\circ$$

$$c = 90^\circ$$

$$d = 70^\circ$$