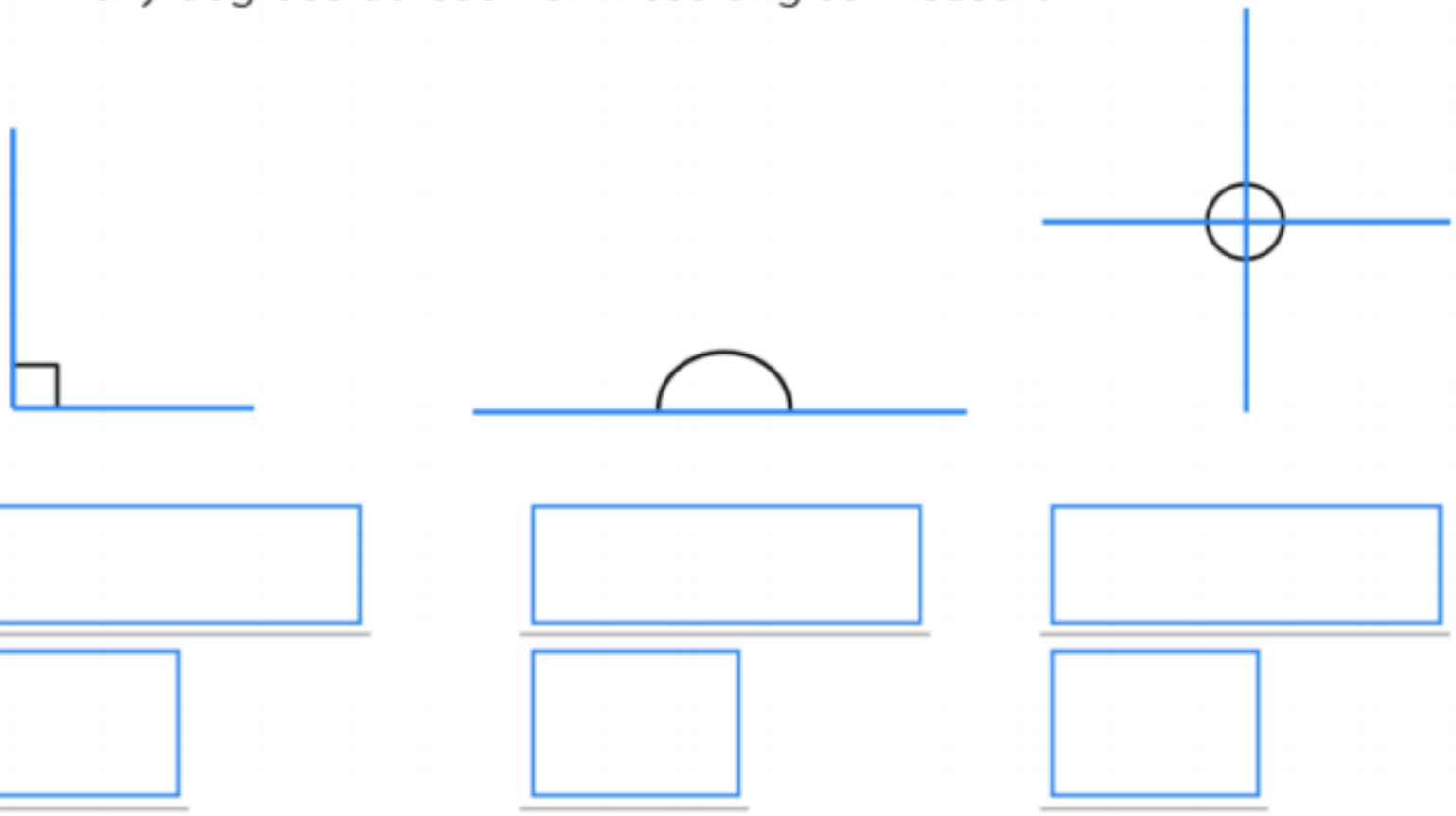
Warm your brains up thinking about the following questions:

Warm Up Challenge

You know that different types of angles have different names.

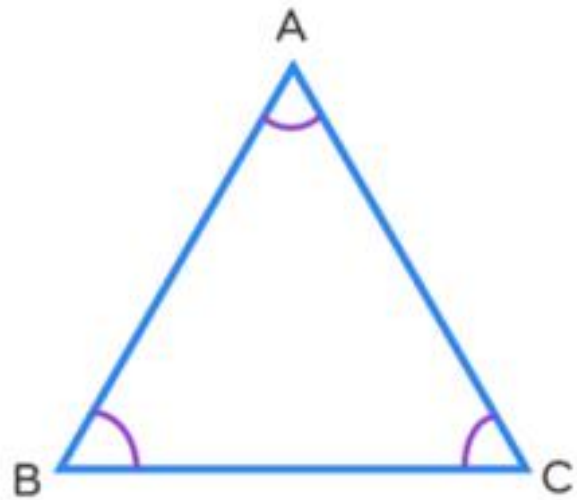
What is the name of each of these types of angles?

How many degrees do each of these angles measure?

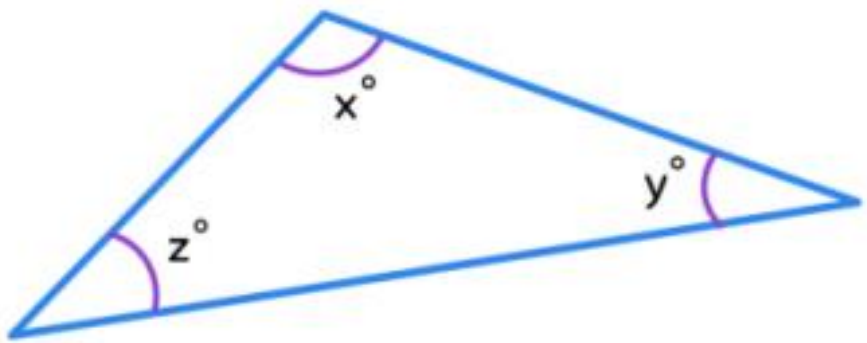


Angles in a triangle

Look at these triangles.



$60° + 60° + 60° = 180°$



$x° + y° + z° =$ ☐

Angles in a triangle

How do we know?

Tear a triangle into 3 pieces with a corner in each.

Join the corners together to make a straight line.

We know that angles on a straight line add up to ☐.

So, the sum of the interior angles in a triangle must be ☐.

Angles in a triangle

Find the missing angle, x, in this triangle.

The sum of all the interior angles of a triangle = ☐

Sum of two given angles = 117° + 34°

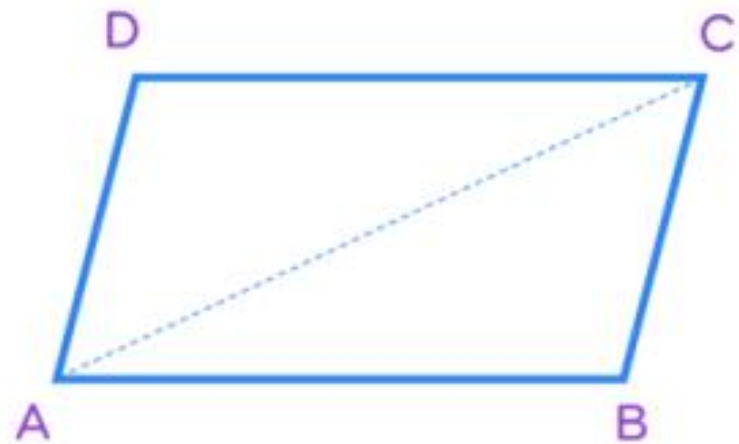
= ☐

So angle x = 180° − ☐

= ☐

Angles in a quadrilateral

ABCD is a quadrilateral made up of two triangles; Δ ABC and Δ ADC, joined together.



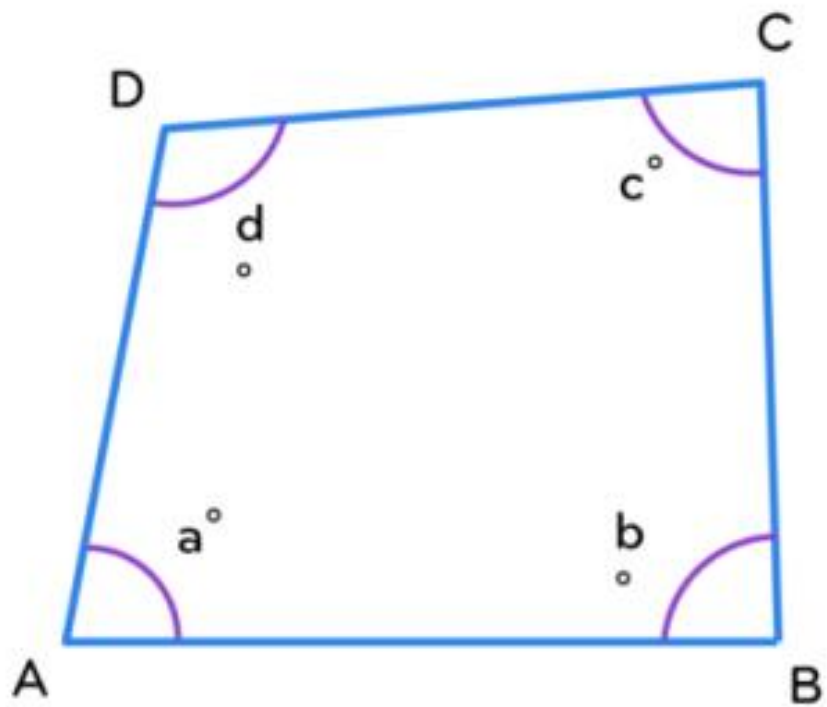
We know the angles in Δ ABC must add up to ☐ and the angles in Δ ADC must add up to ☐

What must the angles in a quadrilateral add up to? ☐

Angles in a quadrilateral

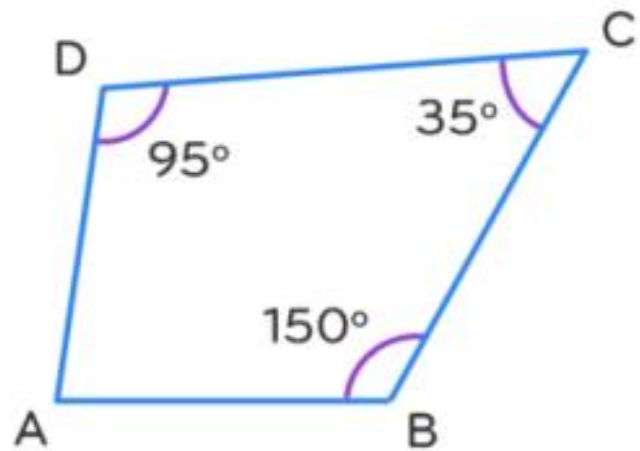
Look at quadrilateral **ABCD**.

$a^\circ + b^\circ + c^\circ + d^\circ =$ ☐



Angles in a quadrilateral

Find the missing angle in this quadrilateral.



Interior angles in a quadrilateral add up to ☐

Sum of the three given angles = ☐ + ☐ + ☐

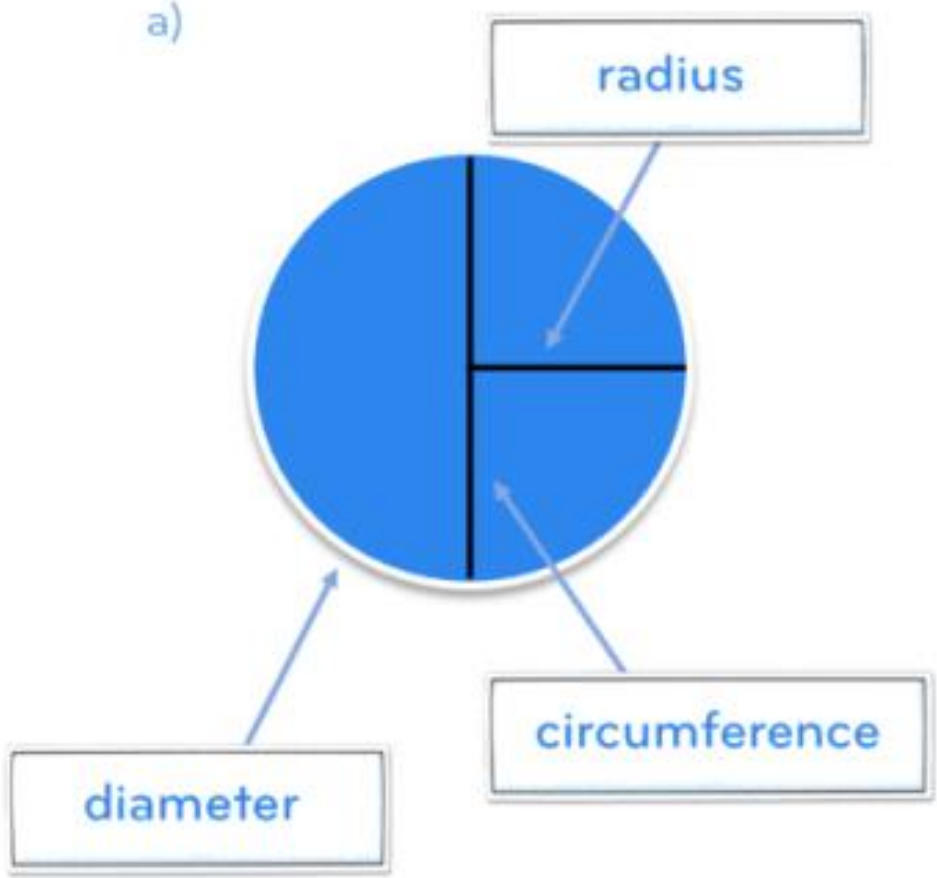
= ☐

So the missing angle = ☐

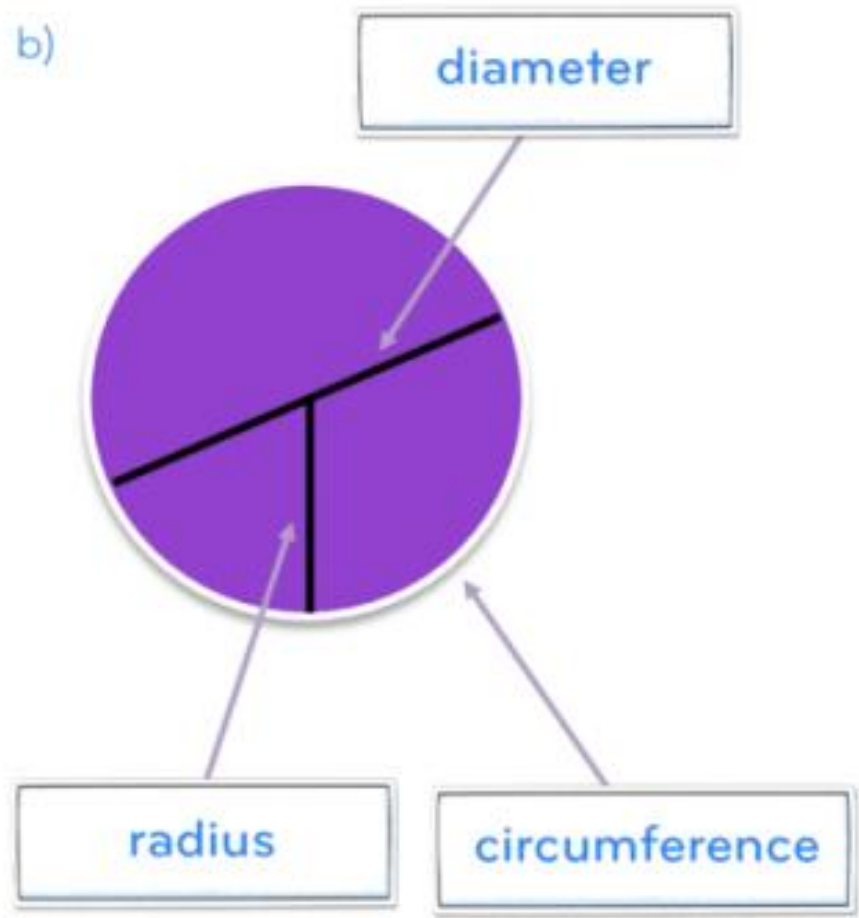
= ☐

1. Tick the circle that is labelled correctly.

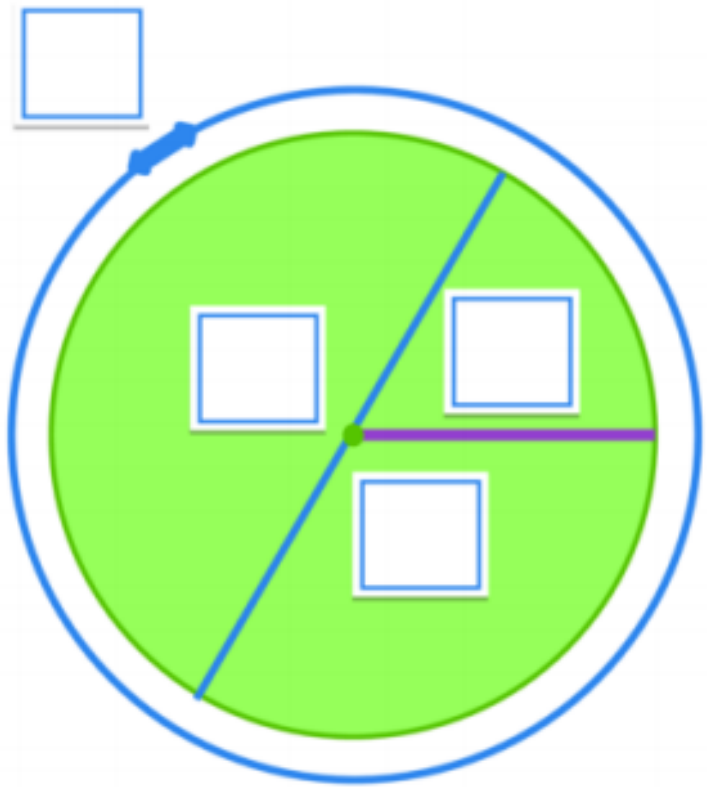
a)



b)



Circle parts



a) Centre

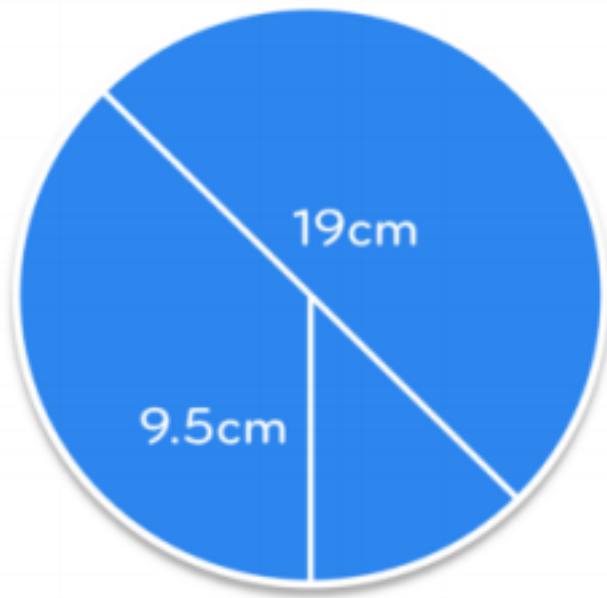
b) Radius

c) Diameter

d) Circumference

Relationship

What do you notice about the diameter and the radius on the circles?



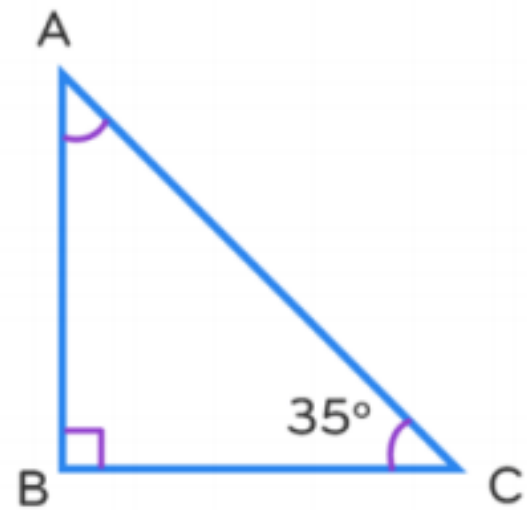
Practice time

1. Complete these.

a) The angles in any triangle add up to ____°

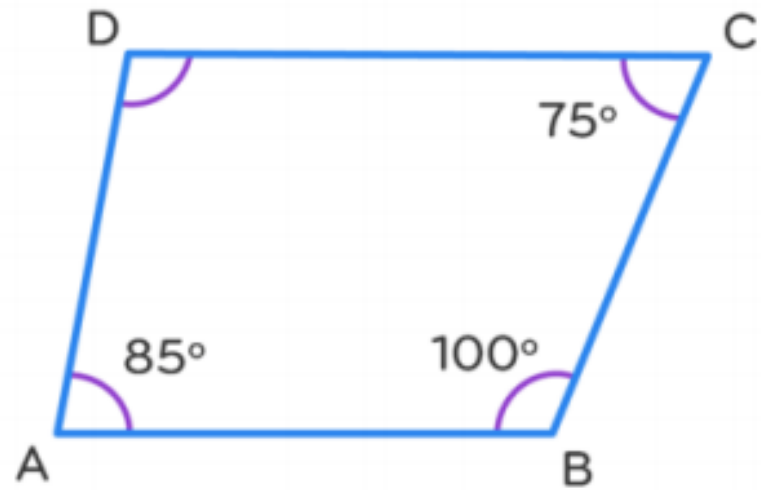
b) The angles in any quadrilateral add up to ____°

2. Find the missing angle in this triangle.



Practice time

3. Find the missing angle in this quadrilateral.

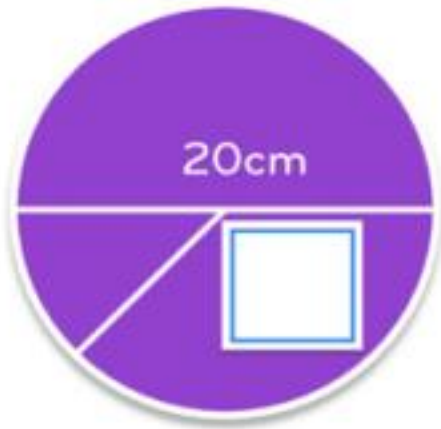


4. Sam has drawn a triangle. One of the angles is a right angle.
What could the other two angles be?

Practice time

Complete.

a)



d = 4.2cm

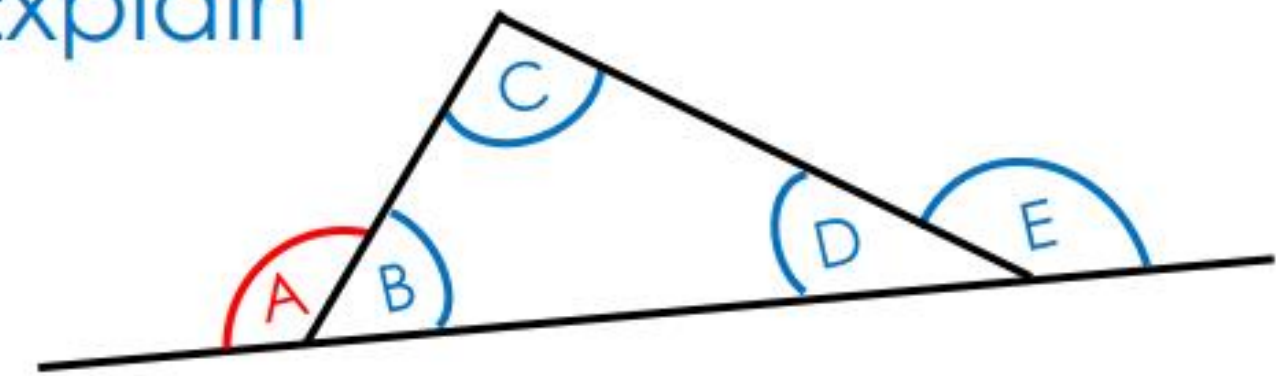
r = ☐

d) r = 13.6cm

d = ☐

Tickle that brain of yours a little further with the following mastery question…

Explain



I can work out angle A if I know…

Angles C and D ☐

Angles D and E ☐

Angles C and E ☐

Tick correct option(s).

Explain how you know.