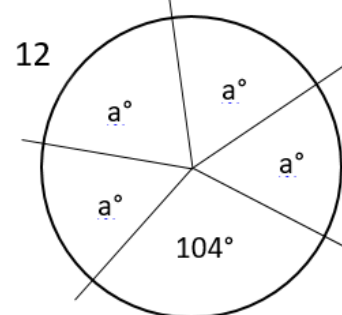
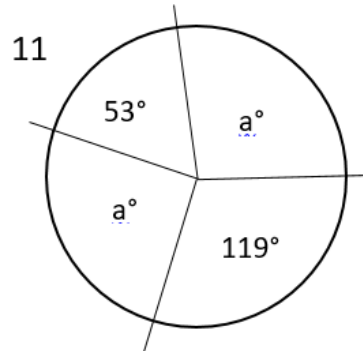
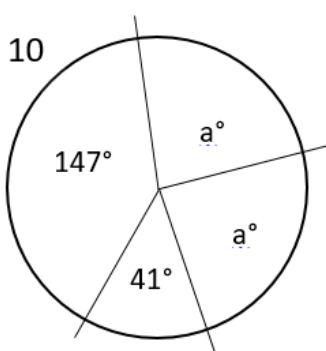
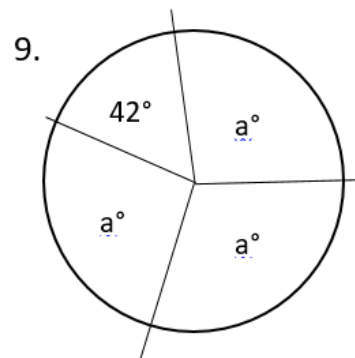
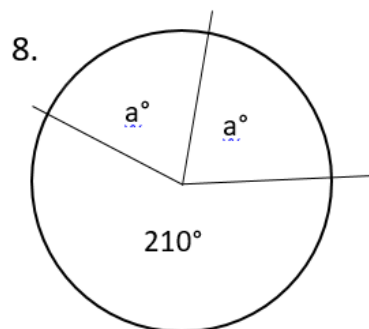
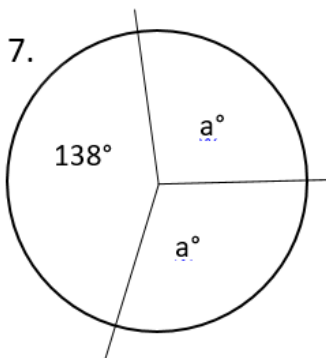
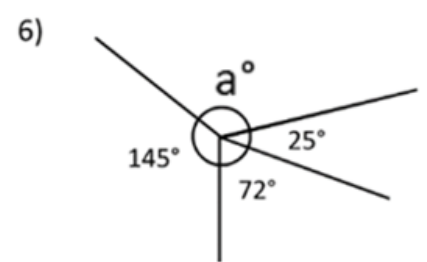
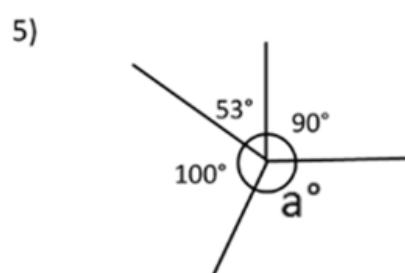
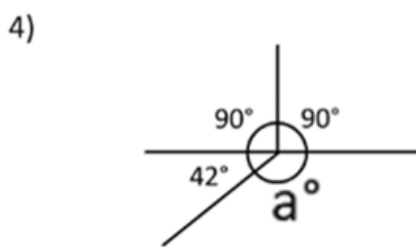
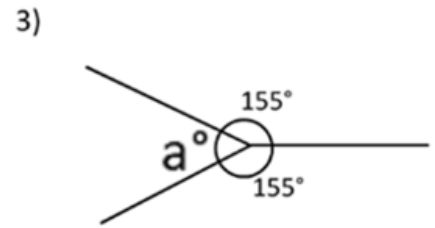
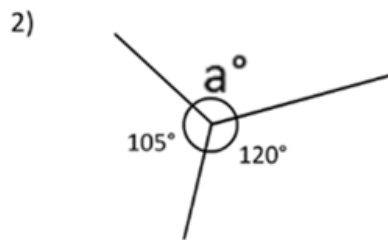
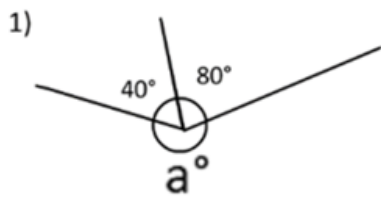


LO: Angles around a point.

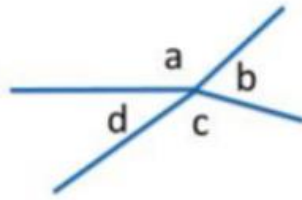
There are 360 degrees in a full turn. Angles around a point total of 360 degrees.

**Calculate the value of angle a**



## Challenge 1

What could the value of  $a$ ,  $b$ ,  $c$  and  $d$  be?



A

$$\begin{aligned} a &= 145^\circ \\ b &= 55^\circ \\ c &= 115^\circ \\ d &= 35^\circ \end{aligned}$$

B

$$\begin{aligned} a &= 155^\circ \\ b &= 50^\circ \\ c &= 125^\circ \\ d &= 40^\circ \end{aligned}$$

C

$$\begin{aligned} a &= 150^\circ \\ b &= 50^\circ \\ c &= 120^\circ \\ d &= 40^\circ \end{aligned}$$

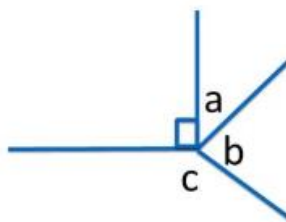
D

$$\begin{aligned} a &= 50^\circ \\ b &= 110^\circ \\ c &= 65^\circ \\ d &= 135^\circ \end{aligned}$$

Which option is correct? Explain why the other options are incorrect.

## Challenge 2

What is the sum of the angles  $a$ ,  $b$  and  $c$ ?



A

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

B

$$a + b + c = 90^\circ$$

C

$$a + b + c = 270^\circ$$

D

$$a + b + c = 360^\circ$$

Which option is correct? Explain why the other options are incorrect.