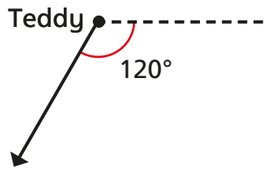
Understand and use the sum of angles at a point

1 **a)** How many degrees are in a full turn?

b) Teddy is facing forward.

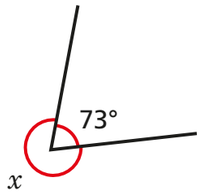
He turns through 120°.



How many more degrees does he need to turn through to get back to his starting point?

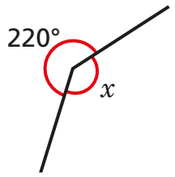
2 Find the size of angle x.

a)



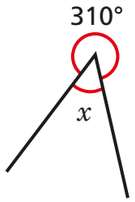
$x =$

b)



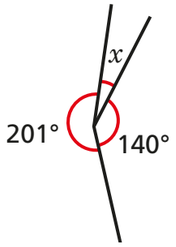
$x =$

c)



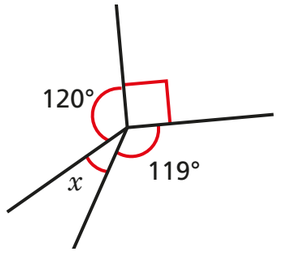
$x =$

d)



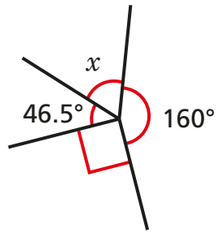
$x =$

e)



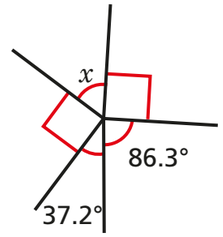
$x =$

f)



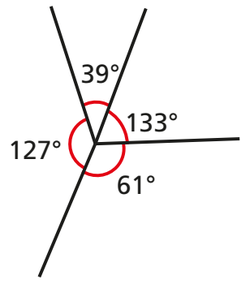
$x =$

g)

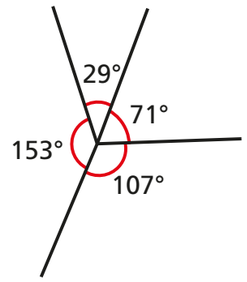


$x =$

3 Tick the correct diagram.



☐



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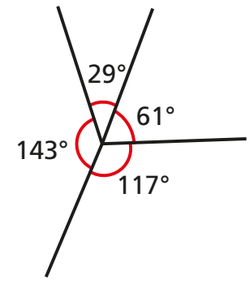
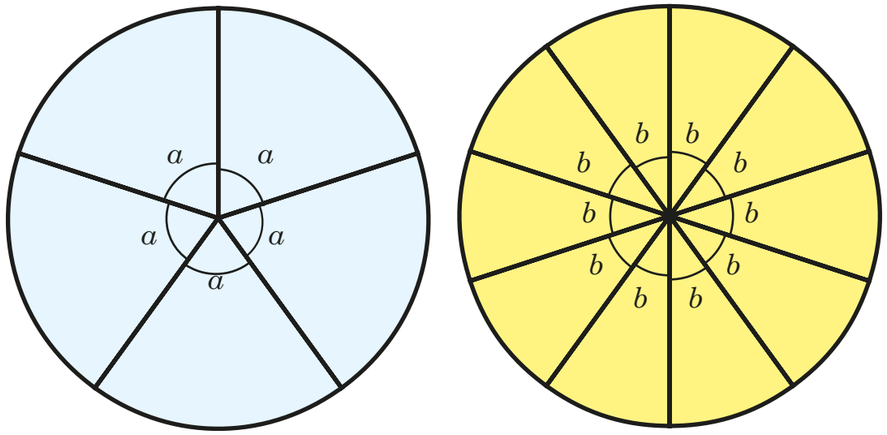


☐

Explain your choice.

4 **a)** Find the sizes of angles a and b.



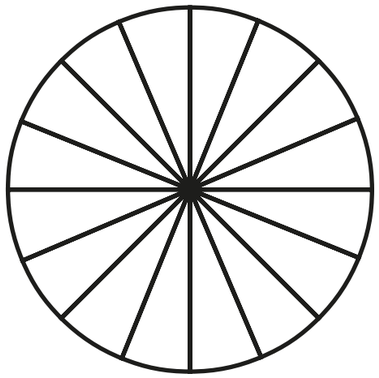
$a =$ ☐ $b =$ ☐

Discuss with a partner how you worked them out.

b) Annie draws a pie chart.

She splits it into 16 equal sectors.

What is the angle of each sector?



☐

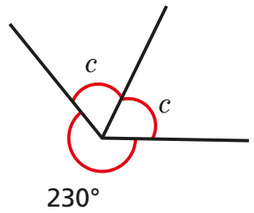
c) Annie's pie chart represents 800 students.

How many students are represented in 5 of the sections?

☐ students

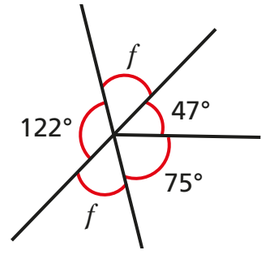
5 Work out the sizes of the unknown angles.

a)



$c =$ ☐

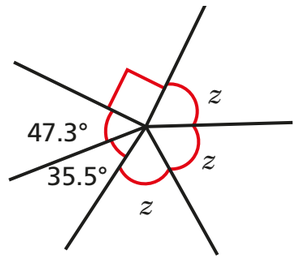
b)



$f =$ ☐

Compare your method with a partner's.

6 Form and solve an equation to find the size of angle z.



$z =$ ☐

7 Four line segments are drawn from a point O.

They are OP, OQ, OR and OS.

P, Q, R and S are points drawn clockwise in order around O.

Angle SOR is 91°.

Angle POQ is 26° more than angle SOR.

Angle QOR is a right angle.

Four children have worked out the size of angle SOP.

Who is correct? Tick your answer.

Tom	Whitney	Esther	Amir
243°	153°	152°	62°

Explain the mistakes that the others have made.