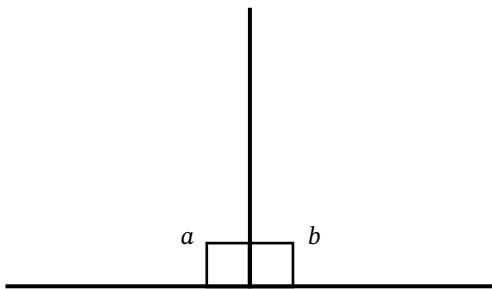


Important note: these diagrams are not to scale, do not use a protractor.

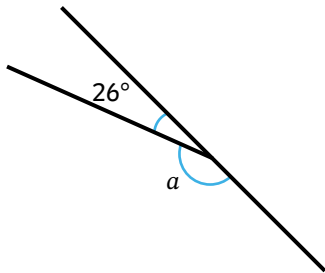


1) Two straight lines are drawn in order to make angles a and b . Tick the statements that are true. Correct any incorrect statements.

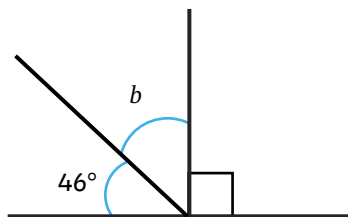


- $a + b = 180^\circ$
- If angle a was increased by 50° , then it would equal 140° .
- If angle a was decreased by 75° , then it would equal 10° .
- If angle b was increased by 30° , then angle a would now equal 50° .

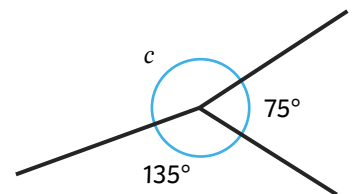
2) Calculate the missing angles.



$a =$

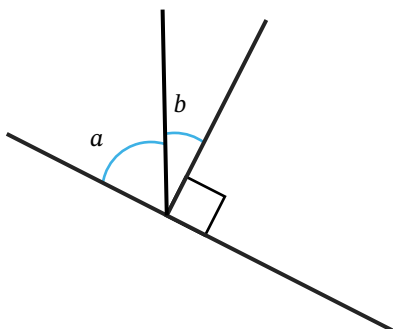


$b =$



$c =$

3) What could angles a and b measure? Give two different possibilities for each angle and explain your reasoning.



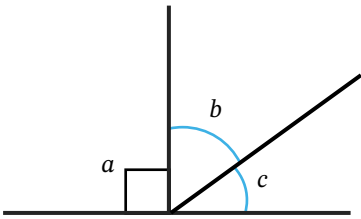
$a =$
 $b =$

$a =$
 $b =$

Important note: these diagrams are not to scale, do not use a protractor.



1) Which of these sets of angles could be angles a , b and c ? Explain why.



Set 1:
 $a = 90^\circ$
 $b = 71^\circ$
 $c = 22^\circ$

Set 2:
 $a = 90^\circ$
 $b = 45^\circ$
 $c = 45^\circ$

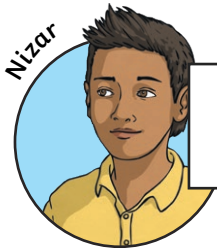
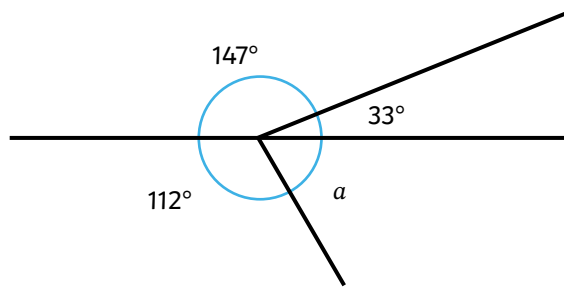
Set 3:
 $a = 89^\circ$
 $b = 61^\circ$
 $c = 30^\circ$

Set 4:
 $a = 90^\circ$
 $b = 64^\circ$
 $c = 26^\circ$

2) Two children are calculating the value of angle a .



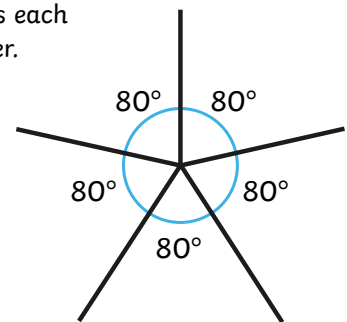
I calculated that angle a has a value of 66° .



I do not agree with Layla. I think angle a has a value of 68° .

Who is correct? Explain your reasoning.

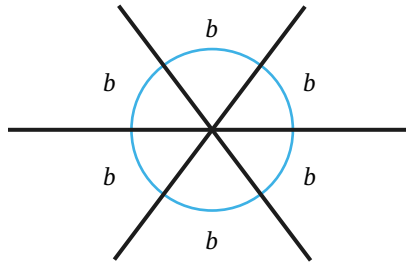
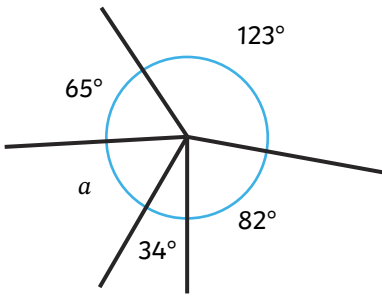
3) There are five equal angles around a point. Each angle measures 80° . Nizar thinks each angle measures 80° . Prove why Nizar is incorrect and calculate the correct answer.



Important note: these diagrams are not to scale, do not use a protractor.



1) Calculate the value of each angle.



$a =$

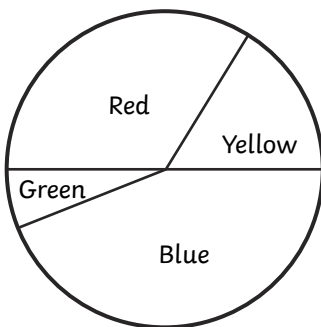
$b =$

Angles $a + b + c =$ a straight line. Now you know the values of a and b , calculate the value of c .

$c =$

2) In the question above, angle b is one of 6 equal angles formed around a point. How many other whole-number equal angles around a point can be formed?

3) This pie chart shows the favourite colour of each member of a class.



$\frac{1}{3}$ of children have red as their favourite colour.
Nine times as many children prefer blue to green.

Give the number of degrees represented by each colour on the pie chart.

Red = _____ Yellow = _____

Green = _____ Blue = _____