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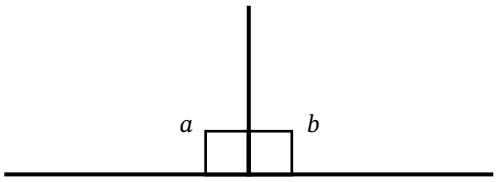
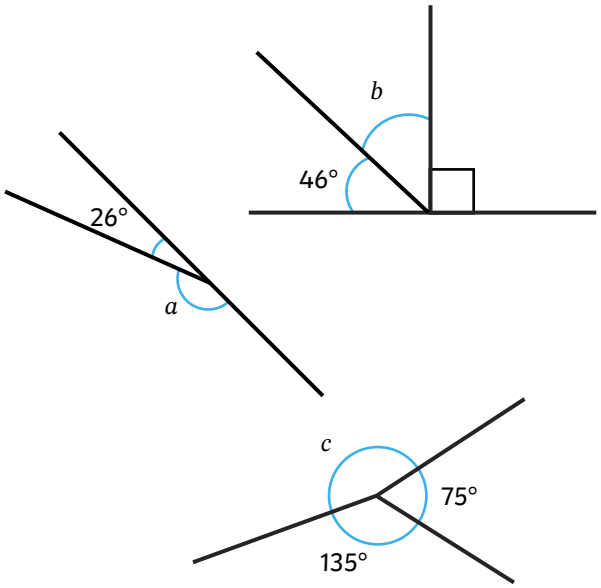
1) Two straight lines are drawn in order to make angles a and b. Tick the statements that are true. Correct any incorrect statements.

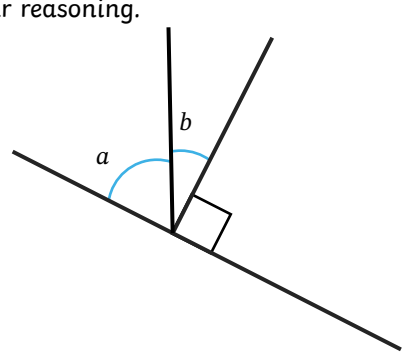


- ◯ $a + b = 180°$
- ◯ If angle a was increased by 50°, then it would equal 140°.
- ◯ If angle a was decreased by 75°, then it would equal 10°.
- ◯ If angle b was increased by 30°, then angle a would now equal 50°.

2) Calculate the missing angles.



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



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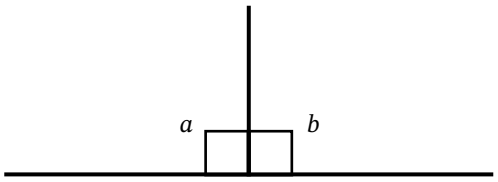

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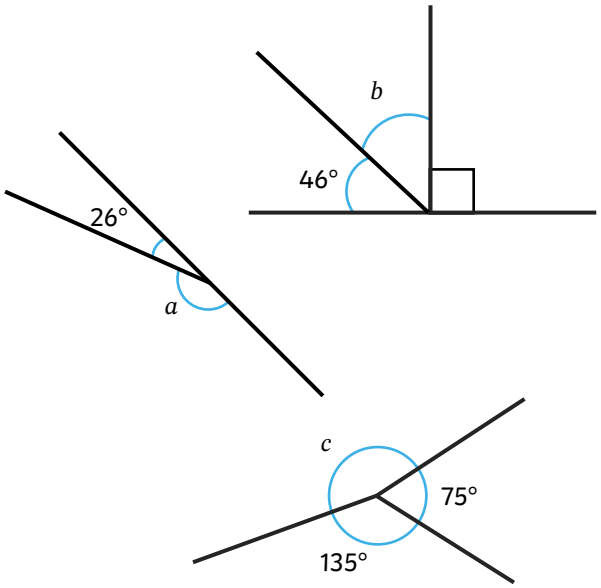

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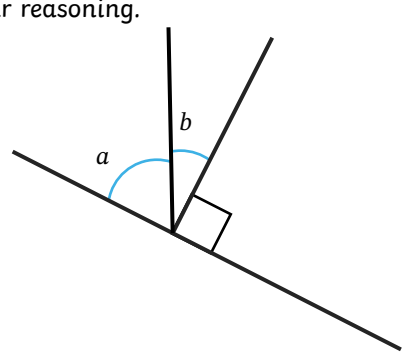

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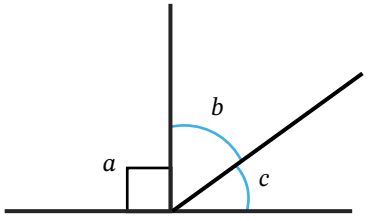
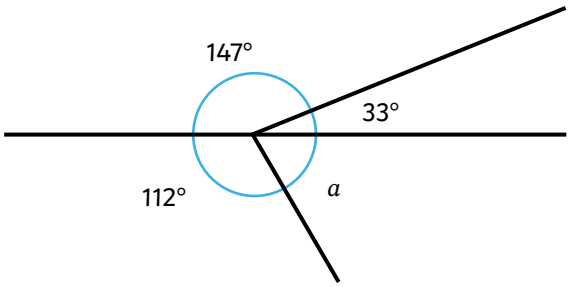
1) Which of these sets of angles could be angles a, b and c? Explain why.



Set 1:	**Set 2:**	**Set 3:**	**Set 4:**
a = 90°	a = 90°	a = 89°	a = 90°
b = 71°	b = 45°	b = 61°	b = 64
c = 22°	c = 45°	c = 30°	c =26°

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

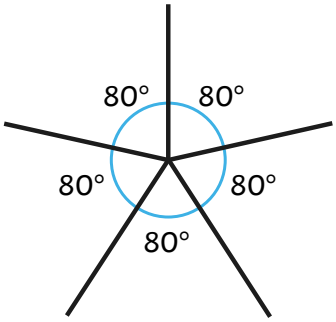


I calculated that angle ***a*** has a value of 66°.

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.



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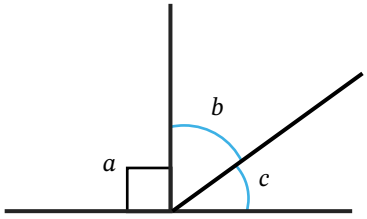

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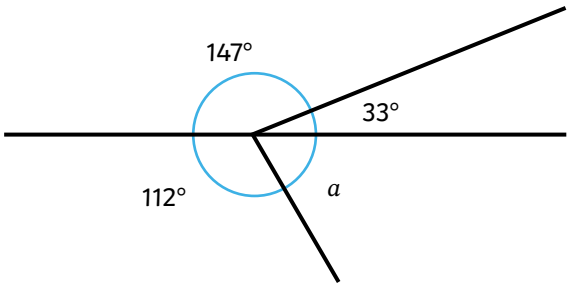

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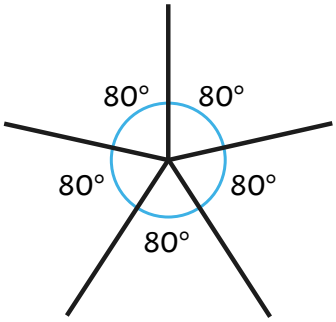

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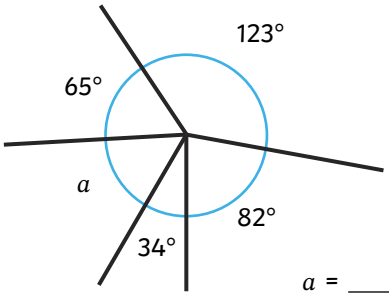
1) Calculate the value of each angle.



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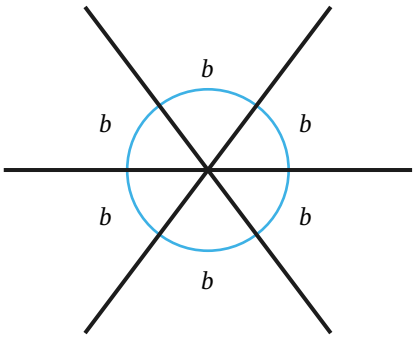
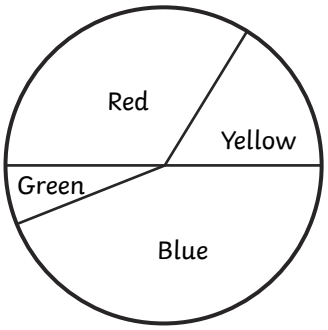


b = _____

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

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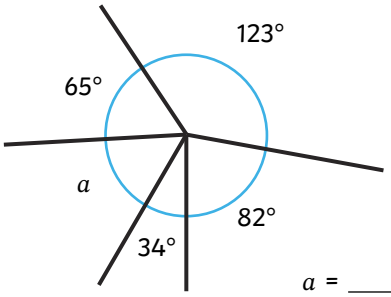

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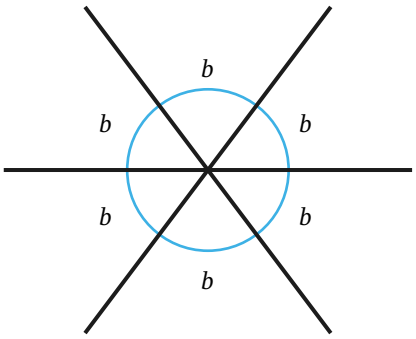

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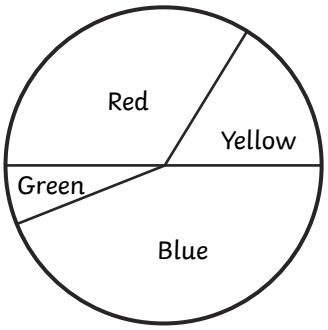

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