



THIRD SPACE
LEARNING

GCSE Exam Questions

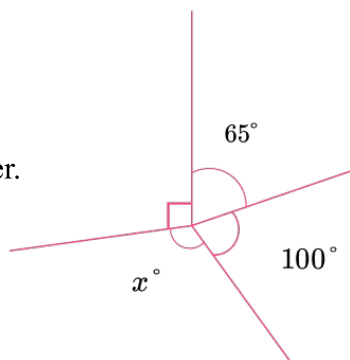
Angles Around a Point |
Geometry & Measure

GCSE Exam Questions: Angles Around a Point

- 1) The diagram shows four angles meeting at a point.

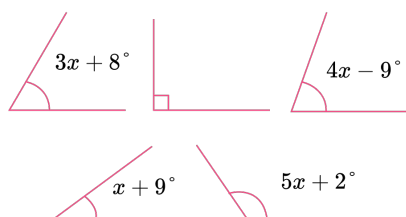
Work out the value of x .

Give a reason for your answer.



(3 marks)

- 2) Below are 5 angles of varying sizes.



- (a) Write an expression for the sum of the angles. Write your answer in the form $ax + b$ where a and b are integers.

(2)

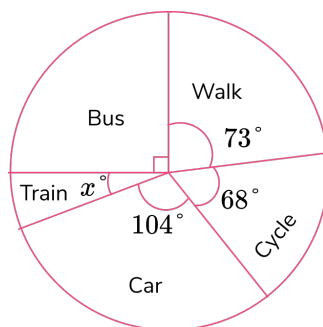
- (b) The sum of their angles is equal to 360° . Calculate the value of x .

(2)
(4 marks)

GCSE Exam Questions: Angles Around a Point

- 3) (a) The pie chart shows data for the different ways a group of 3600 people travel to work.

Calculate the size of angle x .



(2)

- (b) How many people commuted to work using the bus?

(2)

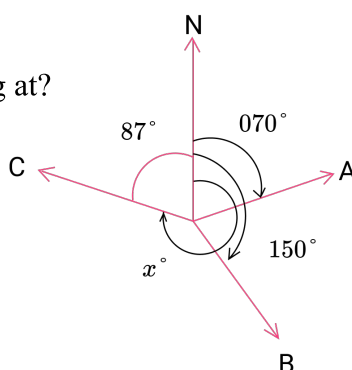
(4 marks)

- 4) (a) Three walking groups set off from their campsite at different bearings.

Group A set off at a bearing of 070° and

Group B set off at a bearing of 150° .

What bearing did Group C start walking at?



(2)

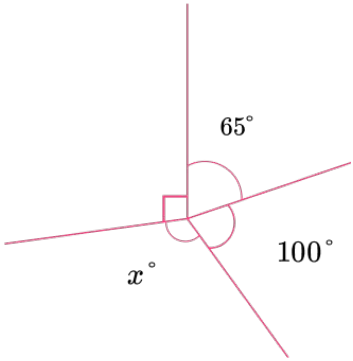
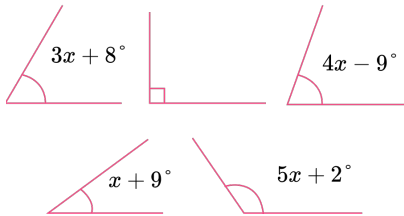
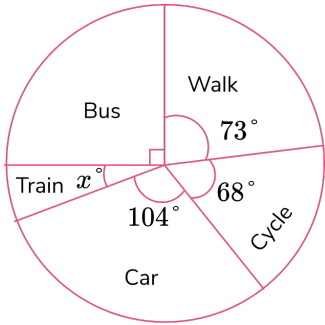
- (b) After 10 minutes, Group C turns to walk directly South.

What angle must they turn in a clockwise direction so they face South?

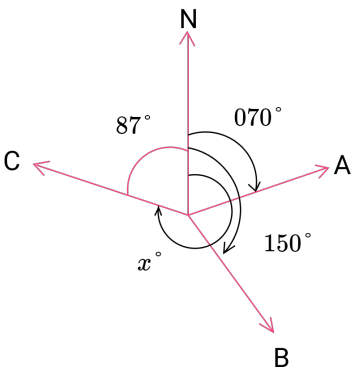
(2)

(4 marks)

GCSE Exam Questions: Angles Around a Point Answers

	Question	Answer	Marks
1)	The diagram shows four angles meeting at a point.  Work out the value of x. Give a reason for your answer.	$x = 360 - (90 + 65 + 100)$ $x = 105$ Reason: angles around a point sum to 360° .	(1) (1) (1)
2) (a)	Below are 5 angles of varying sizes.  Write an expression for the sum of the angles. Write your answer in the form $ax + b$ where a and b are integers.	(a) $(3x + 8) + 90 + (4x - 9) + (x + 9) + (5x + 2)$ $13x + 100$	(1) (1)
(b)	The sum of their angles is equal to 360°. Calculate the value of x.	(b) $13x + 100 = 360$ $13x = 260$ $x = 20^\circ$	(1) (1)
3) (a)	The pie chart shows data for the different ways a group of 3600 people travel to work.  Calculate the size of angle x.	(a) $73 + 68 + 104 + 90 = 335$ $x = 360 - 335 = 25^\circ$	(1) (1)
(b)	How many people commuted to work using the bus?	(b) $3600 \div 4$ $= 900 \text{ people}$	(1) (1)

GCSE Exam Questions: Angles Around a Point Answers

	Question	Answer	Marks
4) (a)	Three walking groups set off from their campsite at different bearings. Group <i>A</i> set off at a bearing of 070° and Group <i>B</i> set off at a bearing of 150°. What bearing did Group <i>C</i> start walking at? 	(a) $360 - 87$ $= 273^\circ$	(1) (1)
(b)	After 10 minutes, Group <i>C</i> turns to walk directly South. What angle must they turn in a clockwise direction so they face South?	(b) $180 + 87$ $= 267^\circ$	(1) (1)

Where to go next?

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