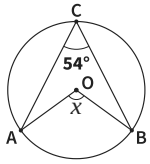
Circle theorems: angle at the centre

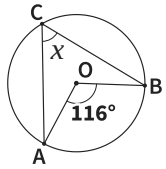
Exit ticket ANSWERS Name _____

1 O is the centre. Find x.



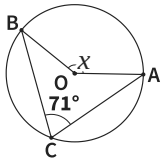
$x =$ 108°

2 O is the centre. Find x.



$x =$ 58°

3 O is the centre. Find x.
Give a reason.



142°: twice the angle at C

Circle theorems: angle at the centre

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The Maths Habit

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The Maths Habit

Exit ticket Circle theorems: angle at the centre

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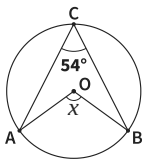

$x = 108°$

TESTS The angle at the centre from the angle at the circumference

LOOK FOR *$27°$* halved: the angle at the centre is the bigger one, 2 × 54

$126°$ 180 − 54: the angle at the centre is twice the angle at C, not the rest of 180°

FIX IT

The angle at the circumference is 39°. Find the angle at the centre on the same arc. *$78°$*

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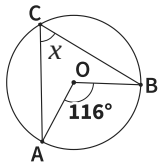
2 **O is the centre. Find x.**



$x = 58°$

TESTS The angle at the circumference from the angle at the centre

LOOK FOR *$232°$* doubled 116: x is at C, the smaller angle, so 116 = 2 × x

$64°$ 180 − 116: x is half of 116

FIX IT

The angle at the centre is 144°. Find the angle at the circumference on the same arc. *$72°$*

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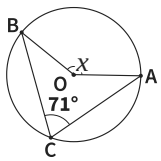
3 **O is the centre. Find x. Give a reason.**



$142°$: twice the angle at C

TESTS The theorem in a turned picture, with the reason written

LOOK FOR *$142°$ with no reason, or "isosceles"* the reason names the theorem: the angle at the centre is twice the angle at the circumference

$35.5°$ halved 71: x is at O, so it is the bigger angle

FIX IT

The angle at the circumference is 64°. Find the angle at the centre on the same arc. Give a reason.

$128°$: the angle at the centre is twice the angle at the circumference