Circle theorems: chords

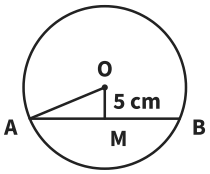
Exit ticket ANSWERS Name _____

1. O is the centre and OM is perpendicular to the chord AB. AM = 9 cm. Find AB. Give a reason.

   18 cm: the perpendicular bisects the chord

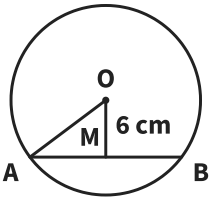
2. O is the centre.
   OM is perpendicular to the chord AB. The radius is 13 cm.
   Find AB.

   AB = 24 cm



3. O is the centre.
   OM is perpendicular to the chord AB. AB = 16 cm.
   Find the radius OA.

   OA = 10 cm



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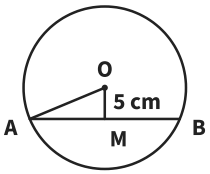

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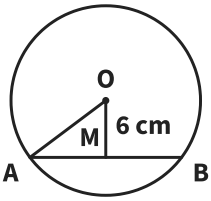

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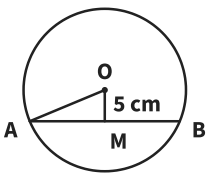

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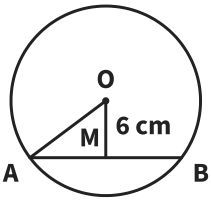

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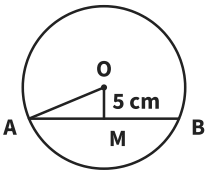

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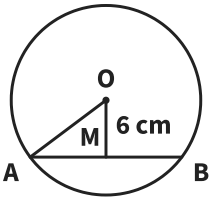

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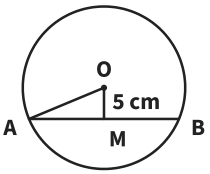

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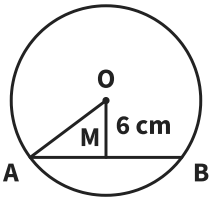

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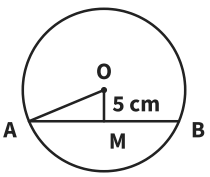

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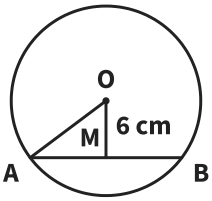

The Maths Habit

Exit ticket Circle theorems: chords

1 **O is the centre and OM is perpendicular to the chord AB. AM = 9 cm. Find AB. Give a reason.**

18 cm: the perpendicular bisects the chord

TESTS The perpendicular from the centre bisects the chord

LOOK FOR

4.5 cm halved: 9 cm is AM, half of the chord, so double it

9 cm AM given as the whole chord

FIX IT

OM is perpendicular to the chord AB, and O is the centre. MB = 13 cm. Find AB. *26 cm*

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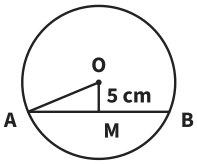
2 **O is the centre. OM is perpendicular to the chord AB. The radius is 13 cm. Find AB.**



AB = 24 cm

TESTS Pythagoras in the triangle OAM, then double

LOOK FOR

12 cm AM found and not doubled

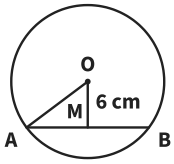
27.9 cm the squares added: OA is the hypotenuse, so subtract

FIX IT

O is the centre and OM is perpendicular to the chord AB. OA = 25 cm and OM = 7 cm. Find AB. *48 cm*

---

3 **O is the centre. OM is perpendicular to the chord AB. AB = 16 cm. Find the radius OA.**



OA = 10 cm

TESTS The radius from the chord: halve, then the hypotenuse

LOOK FOR

17.1 cm 16 cm used: AM is half of AB, 8 cm

5.3 cm the squares subtracted: OA is the hypotenuse, so add

FIX IT

O is the centre and OM is perpendicular to the chord AB. AB = 30 cm and OM = 8 cm. Find the radius OA. *17 cm*