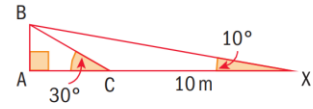


EXAM-STYLE QUESTION

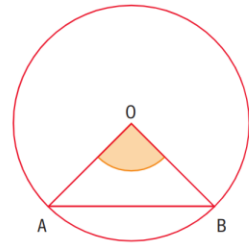
- 8 In the diagram, $\hat{A} = 90^\circ$, $CX = 10\text{ m}$, $\hat{ACB} = 30^\circ$ and $\hat{X} = 10^\circ$
- Write down the size of angle BCX .
 - Find the length of BC .
 - Find the length of AB .



EXAM-STYLE QUESTIONS

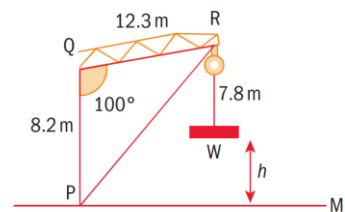
- 6 X, Y and Z are three towns. X is 30 km due south from Y. Z is to the east of the line joining XY. The distance from Y to Z is 25 km and the distance from X to Z is 18 km.
- Represent this information in a clear and labeled diagram.
 - Find the size of angle Z.
- 7 Alison, Jane and Stephen are together at point A. Jane walks 12 m due south from A and reaches point J. Stephen looks at Jane, turns through 110° , walks 8 m from A and reaches point S.
- Represent this information in a clear and labeled diagram.
 - Find how far Stephen is from Jane.
 - Find how far **north** Stephen is from Alison.

- 8 The diagram shows a circle of radius 3 cm and center O. A and B are two points on the circumference. The length AB is 5 cm. A triangle AOB is drawn inside the circle. Calculate the size of angle AOB.

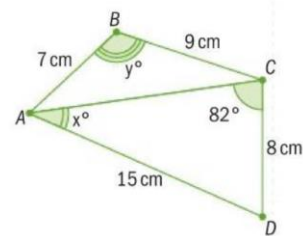


EXAM-STYLE QUESTION

- 9 The diagram shows a crane PQR that carries a flat box W. PQ is vertical, and the floor PM is horizontal. Given that $PQ = 8.2\text{ m}$, $QR = 12.3\text{ m}$, $\hat{PQR} = 100^\circ$ and $RW = 7.8\text{ m}$, calculate
- PR
 - the size of angle PRQ
 - the height, h , of W above the floor, PM.

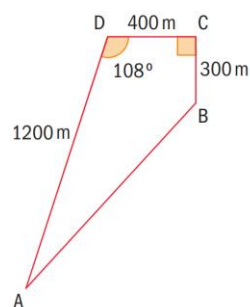


- 7 The diagram shows quadrilateral ABCD, with $AB = 7\text{ cm}$, $BC = 9\text{ cm}$, $CD = 8\text{ cm}$, and $AD = 15\text{ cm}$. Angle $ACD = 82^\circ$, angle $CAD = x^\circ$, and angle $ABC = y^\circ$
- Find the value of x .
 - Find AC .
 - Find the value of y .
 - Find the area of triangle ABC.



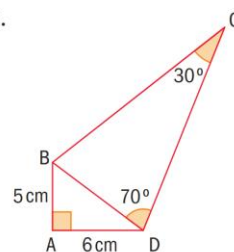
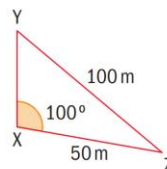
EXAM-STYLE QUESTION

- 3 The diagram shows a cross-country running course. Runners start and finish at point A.
- Find the length of BD.
 - Find the size of angle BDC, giving your answer correct to two decimal places.
 - Write down the size of angle ADB.
 - Find the length of AB.
 - Find the perimeter of the course.
 - Rafael runs at a constant speed of 3.8 m s^{-1} . Find the time it takes Rafael to complete the course. Give your answer correct to the nearest minute.
 - Find the area of the quadrilateral ABCD enclosed by the course. Give your answer in km^2 .



EXAM-STYLE QUESTIONS

- 5 The diagram shows a triangular field XYZ. XZ is 50 m, YZ is 100 m and angle X is 100° .
- Find angle Z.
 - Find the area of the field. Give your answer correct to the nearest 10 m^2 .
- 6 The area of an isosceles triangle ABC is 4 cm^2 . Angle B is 30° and $AB = BC = x \text{ cm}$.
- Write down, in terms of x , an expression for the area of the triangle.
 - Find the value of x .
- 7 In the diagram, $AB = 5 \text{ cm}$, $AD = 6 \text{ cm}$, $\hat{B}AD = 90^\circ$, $\hat{B}CD = 30^\circ$, $\hat{B}DC = 70^\circ$.
- Find the length of DB.
 - Find the length of DC.
 - Find the area of triangle BCD.
 - Find the area of the quadrilateral ABCD.



EXAM-STYLE QUESTIONS

- 6 In the diagram, triangle ABC is isosceles. $AB = AC$, $CB = 20 \text{ cm}$ and angle ACB is 32° . Find
- the size of angle CAB
 - the length of AB
 - the area of triangle ABC.
- 7 A gardener pegs out a rope, 20 metres long, to form a triangular flower bed as shown in this diagram.
- Write down the length of AC.
 - Find the size of the angle BAC.
 - Find the area of the flower bed.
- 8 The diagram shows a circle with diameter 10 cm and center O. Points A and B lie on the circumference and the length of AB is 7.5 cm. A triangle AOB is drawn inside the circle.
- Find the size of angle AOB.
 - Find the area of triangle AOB.
 - Find the shaded area.

