Name:

Exam Style Questions

Sine Rule
Cosine Rule
Area of a Triangle (Sine)

Corbettmaths

Equipment needed: Ruler, Pencil, Calculator and Pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

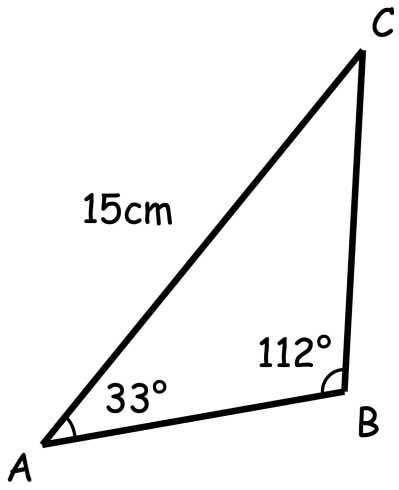
Video Tutorial

www.corbettmaths.com/contents

Videos 333 to 337

Answers and Video Solutions

1.



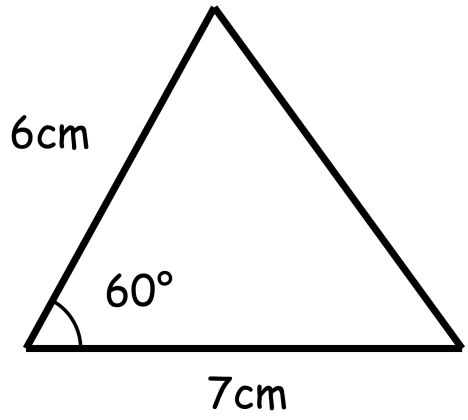
In triangle ABC the length of AC is 15cm
Angle ABC = 112°
Angle BAC = 33°

Work out the length of BC.

.....cm

(3)

2.

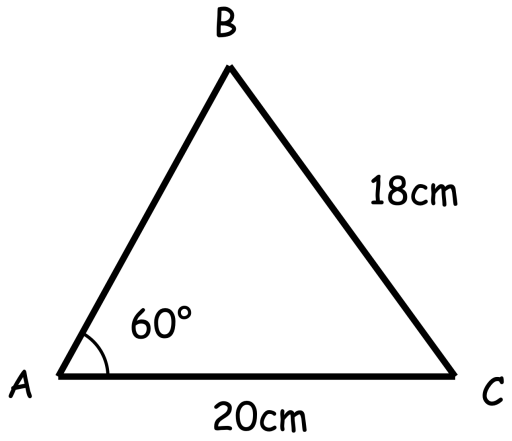


Calculate the area of the triangle.

.....cm²

(2)

3.

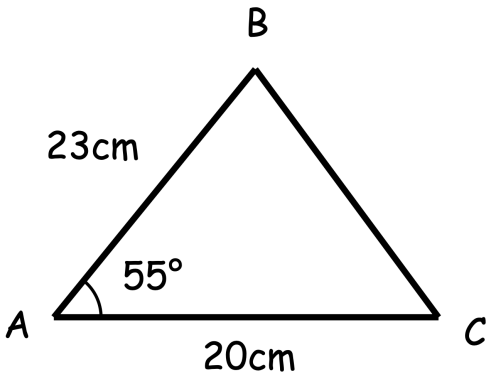


Calculate the size of angle ABC.

.....°

(3)

4.

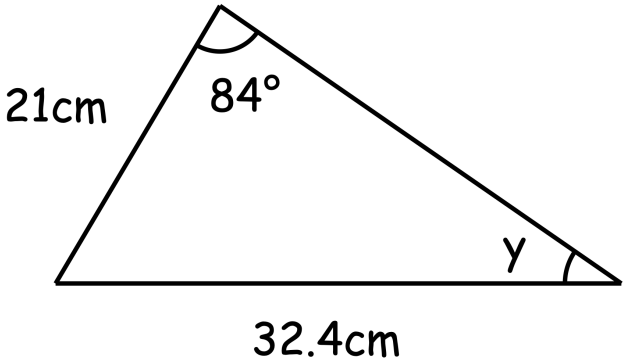


Calculate the length of BC.

.....cm

(3)

5.

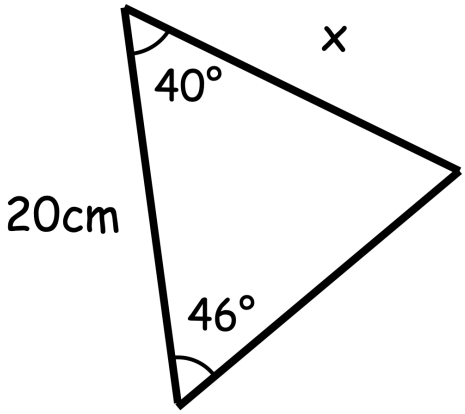


Calculate the size of the angle labelled y.

.....°

(3)

6.

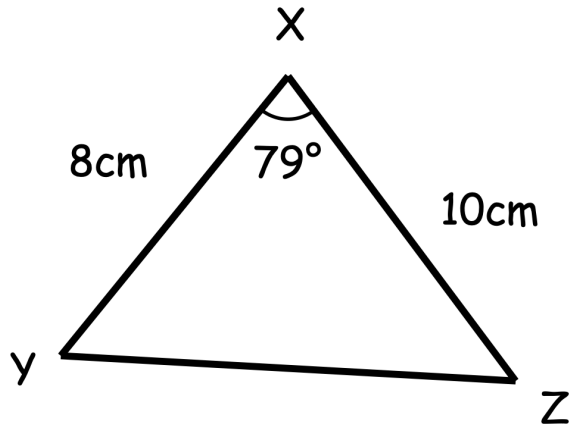


Find the size of x.

.....cm

(3)

7.



XY = 8cm
XZ = 10cm
angle YXZ = 79°

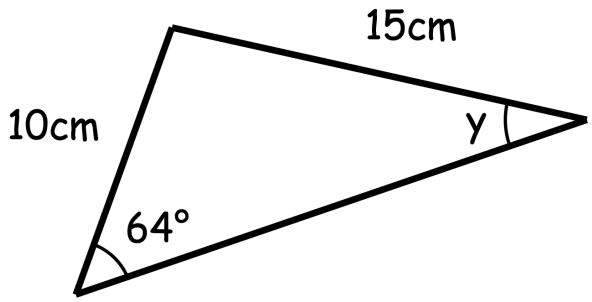
(a) Calculate the area of the triangle XYZ.

.....cm²
(3)

(b) Calculate the length of YZ.

.....cm
(3)

8.

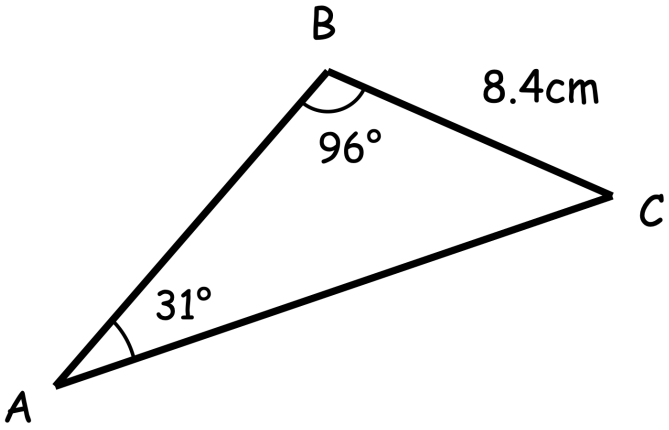


Find the size of y.

.....°

(3)

9.

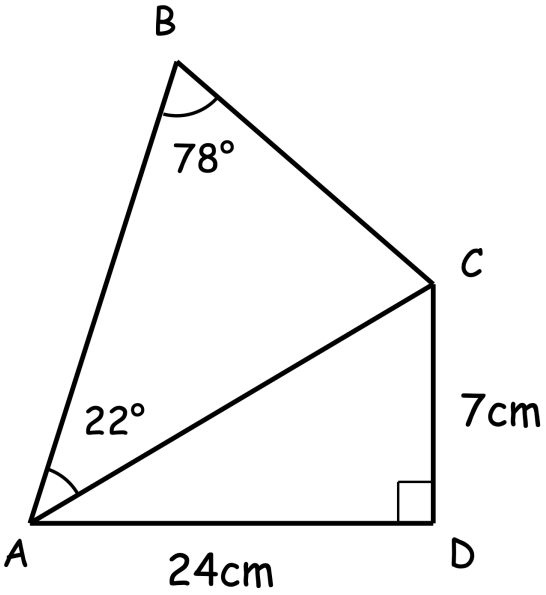


Calculate the length of AB.

.....cm

(3)

10. ABC and ACD are triangles

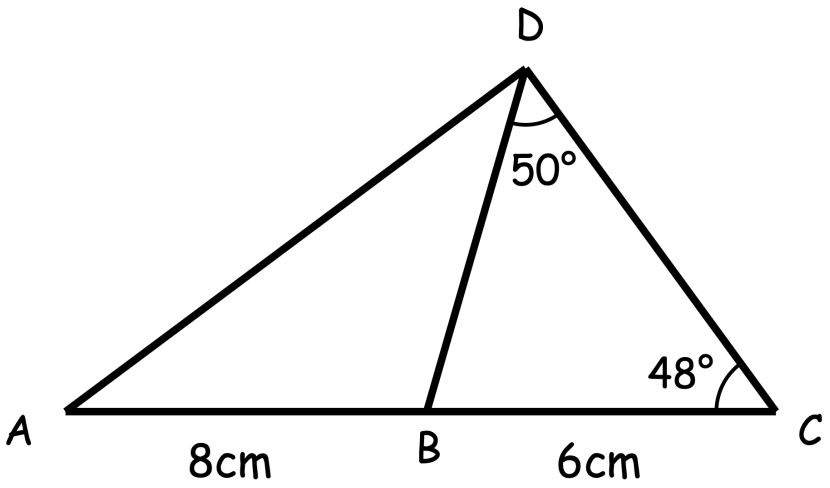


Calculate the length of BC.

.....cm

(4)

11.



ACD is a triangle and B is a point on AC.
AB = 8cm and BC is 6cm.
Angle BCD = 48° and angle BDC = 50°.

(a) Find the length of BD.

.....cm
(3)

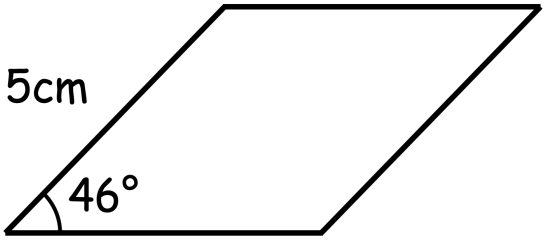
(b) Find the length of AD.

.....cm
(3)

(c) Find the area of triangle ABD.

.....cm²
(3)

12. Shown below is a rhombus.

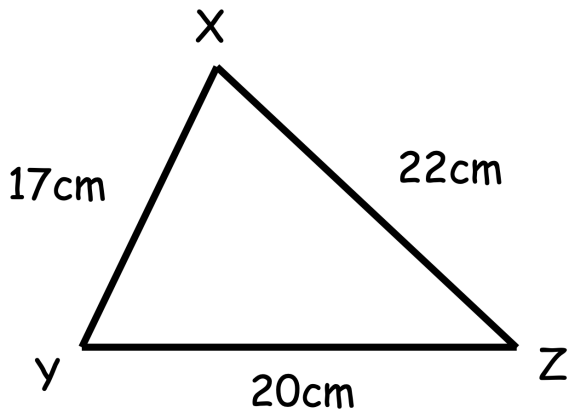


Find the area of the rhombus.

.....cm²

(3)

13.

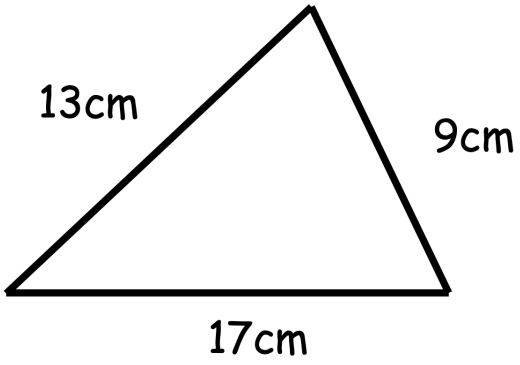


Find the size of angle XZY.

.....°

(3)

14.

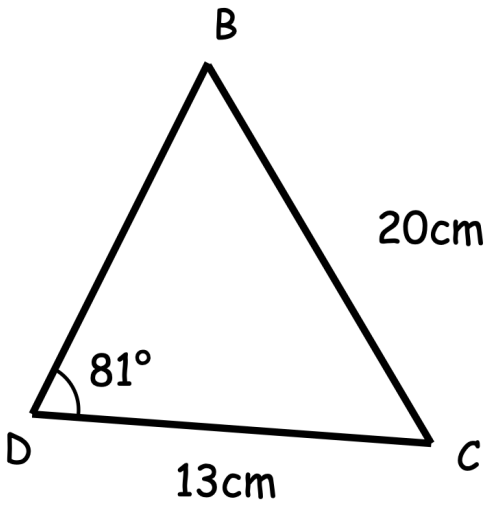


Calculate the size of the smallest angle in the triangle.

.....°

(4)

15. Shown below is triangle BCD.

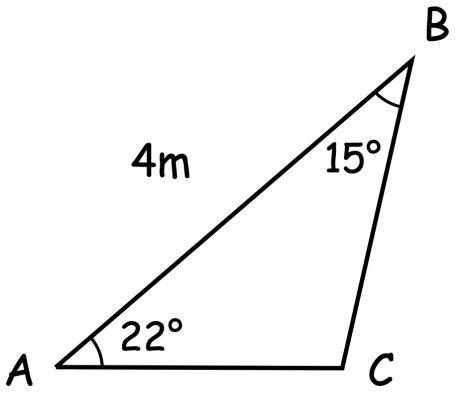


Calculate the size of angle BCD.
Give your answer correct to 2 decimal places.

.....°

(4)

16. Shown below is triangle ABC.

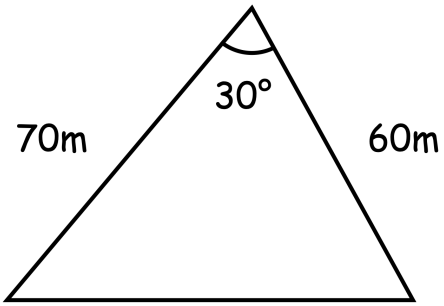


Calculate the length of AC.

.....m

(3)

17. Shown below is a sketch of a field.

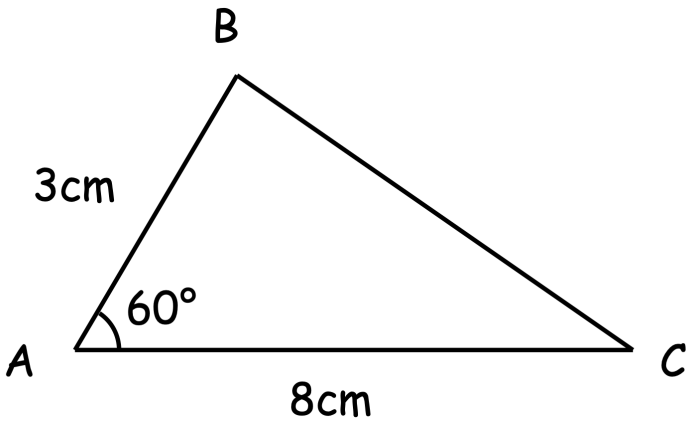


Work out the area of the field.

.....m²

(2)

18. Shown below is triangle ABC.

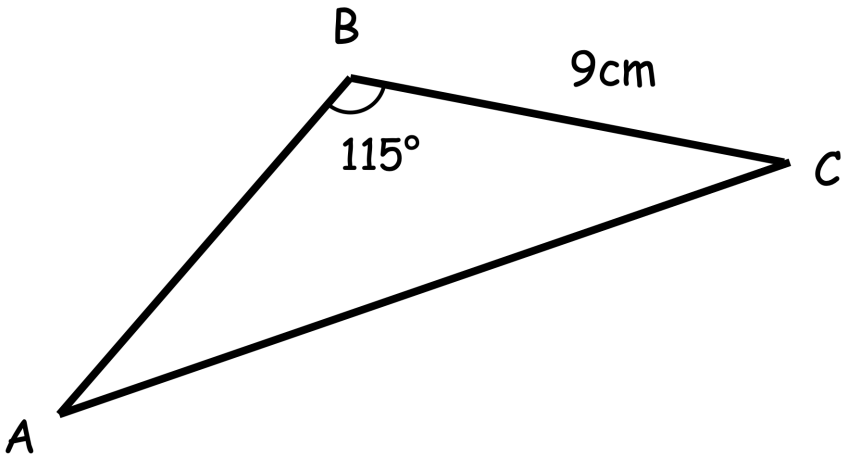


Work out the length of BC.

.....cm

(3)

19. Shown below is triangle ABC.

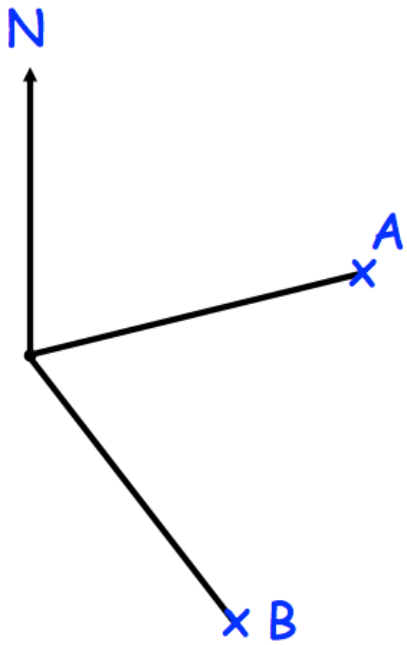


The area of triangle ABC is 72cm²

Calculate the length of AB.
Give your answer to 2 decimal places.

.....cm
(3)

20.



Two ships, A and B, leave a port at 11:00
A travels on a bearing of 080° at a speed of 25km/h
B travels on a bearing of 152° at a speed of 20km/h

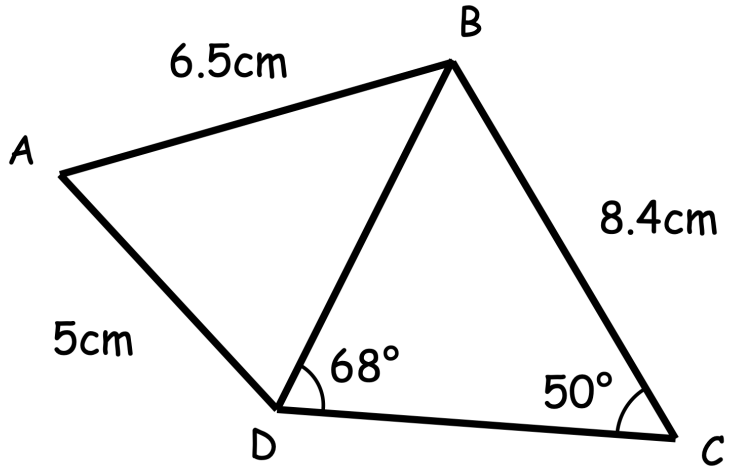
(a) Work out the distance between A and B at 14:00

.....km
(3)

(b) Work out the bearing of B from A at 14:00

.....°
(3)

21.

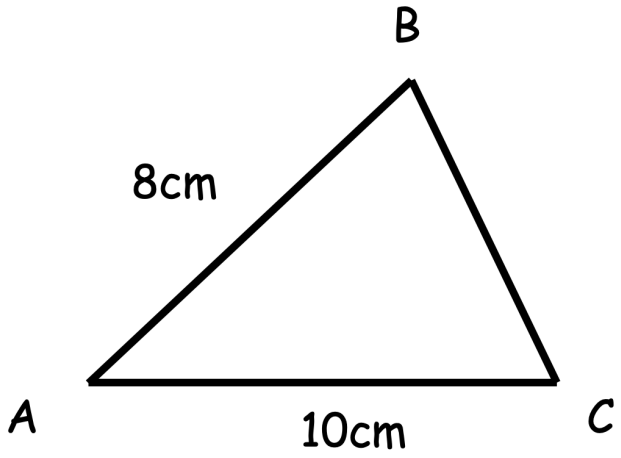


Calculate the size of angle ABD.

.....°

(4)

22.



AB = 8cm AC = 10cm

Angle BAC is acute.

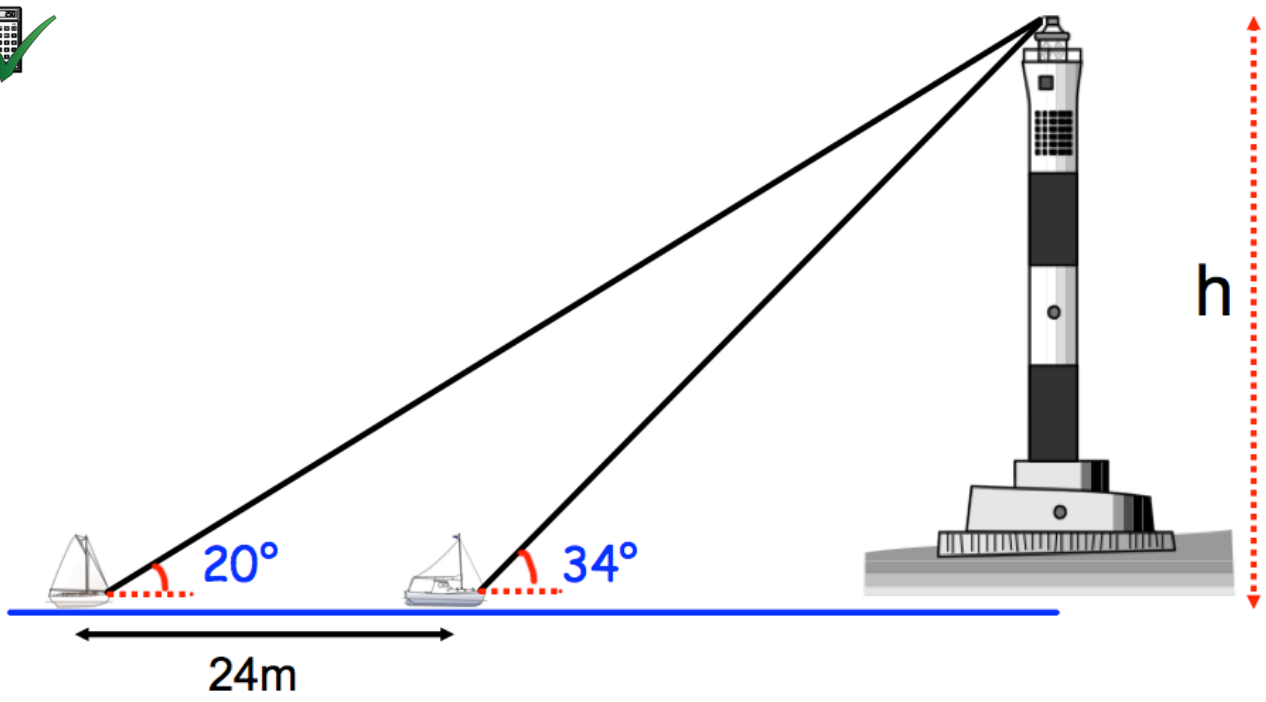
The area of the triangle shown is 25cm²

Calculate the perimeter of the triangle

.....cm

(4)

23.



Two small boats are 24m apart.

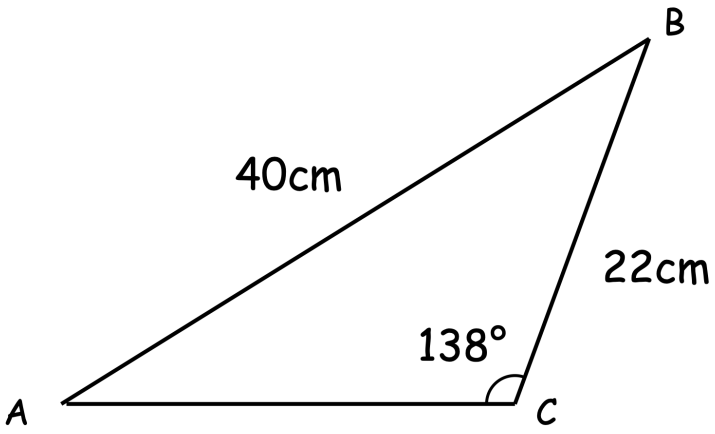
The angle of elevation of the boats to the top of a lighthouse are 20° and 34° respectively.

Calculate the height of the lighthouse.

.....m

(6)

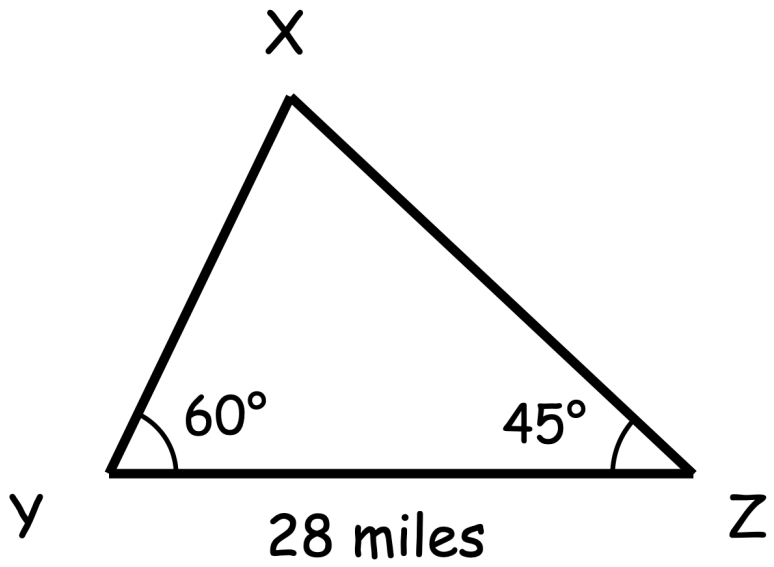
24. Shown below is triangle ABC



Calculate the length of AC.
Give your answer to 2 decimal places.

.....cm
(5)

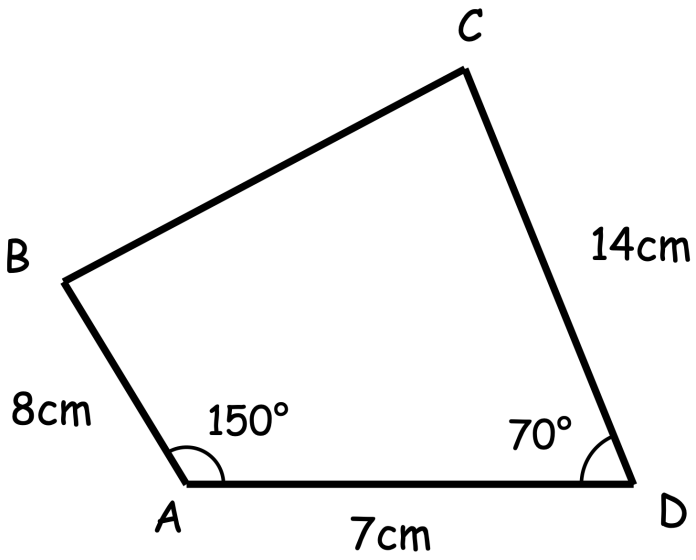
25. A boat, located at position X is running out of fuel.
There are two ports located at Y and Z.
The boat must refuel as soon as possible.



How much closer is the boat to the port at Y than the port at Z?

.....miles
(4)

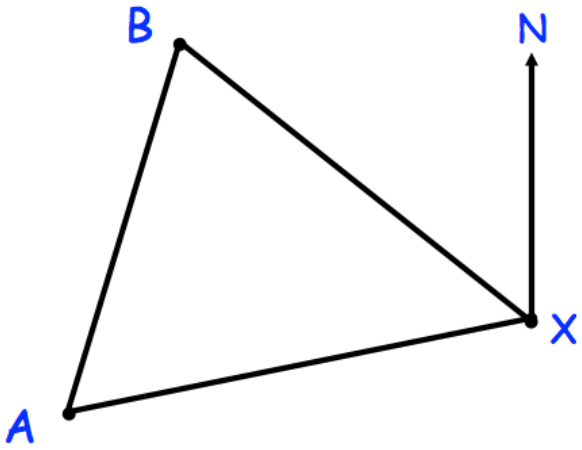
26. In a quadrilateral ABCD, AD = 7cm, AB = 8cm and CD = 14cm.
Angle BAD = 150° and Angle ADC = 70°



Calculate the length BC.

.....cm
(6)

27.



Ship A is 50km from X on a bearing of 258°
Ship B is 44km from X on a bearing of 312°

(a) Calculate the distance between A and B.

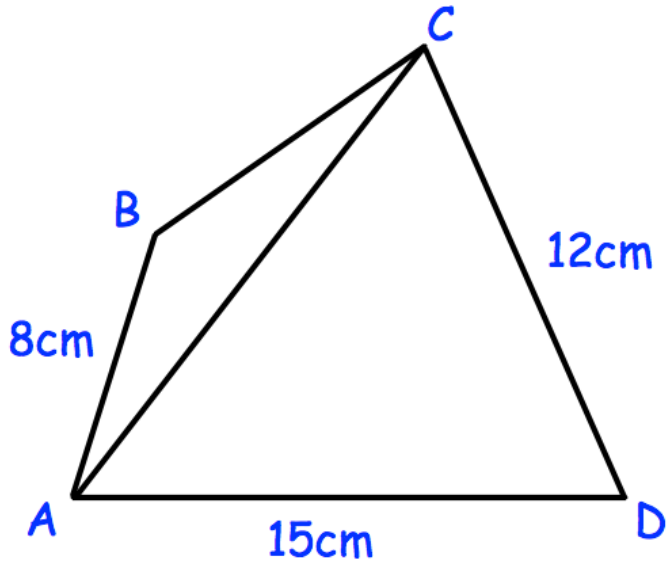
.....km
(3)

(b) Calculate the bearing of A from B.

.....°
(3)

28. ABCD is a quadrilateral.

AB = 8cm, AD = 15cm and CD = 12cm.
Angle ADC = 78° and angle BAC = 20°



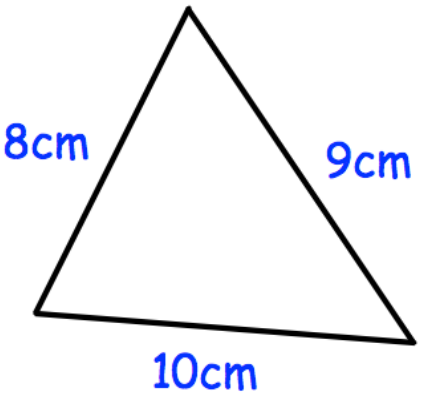
(a) Calculate the length of AC.

.....cm
(3)

(b) Calculate the area of triangle ABC.

.....cm²
(2)

29.



Find the area of the triangle.

.....cm²

(5)

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30. A clock has two hands.

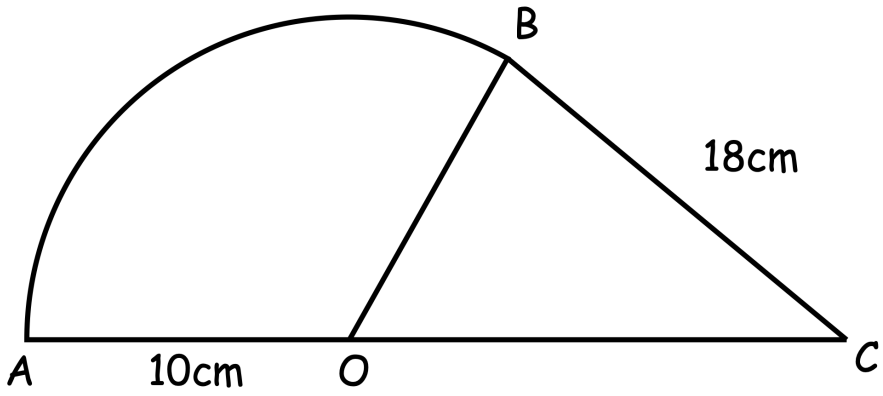
A minute hand that is 7cm long and an hour hand that is 5cm long.

Find the distance between the tips of the two hands at 13:40

.....cm

(4)

31. OAB is a sector of a circle, centre O.
AOC is a straight line.



AO = 10cm BC = 18cm

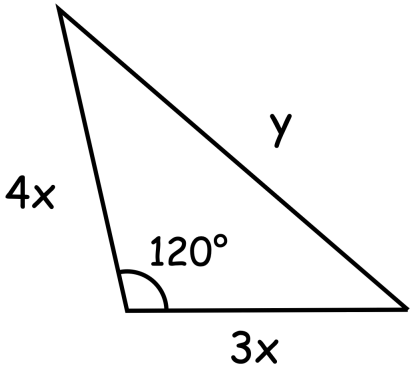
Arc AB has a length of 19.5cm

Calculate the size of angle OCB.

.....°

(6)

32.



Work out the ratio $y : x$

.....

(4)