Trigonometry

Total Marks: 44

Question 1

$ABCD$ is a trapezium.

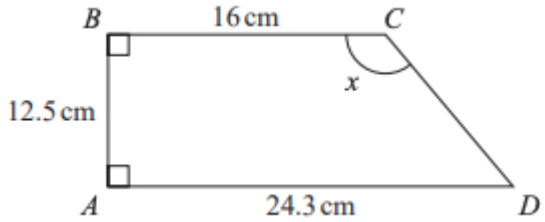


Diagram **NOT** accurately drawn

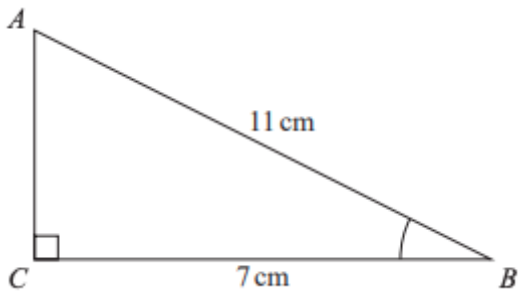
Work out the size of angle x .
Give your answer correct to 1 decimal place.

$x =$ ..... °

(4 marks)

Question 2

ABC is a right-angled triangle.



Work out the size of angle ABC .
Give your answer correct to 1 decimal place.

..... °

(2 marks)

Question 3

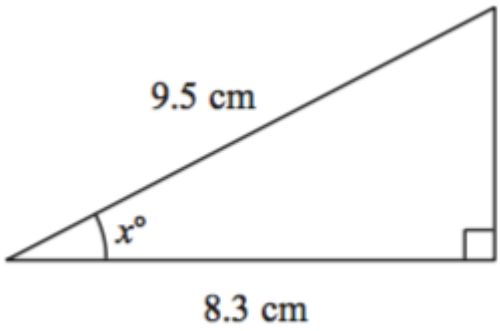


Diagram **NOT** accurately drawn

Work out the value of x .
Give your answer correct to 1 decimal place.

$x =$ ..... °

(3 marks)

Question 4

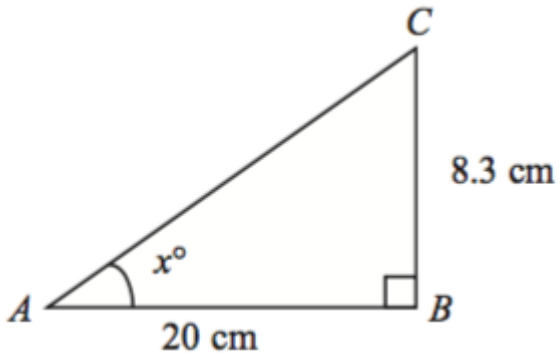


Diagram **NOT** accurately drawn

Triangle *ABC* is right-angled at *B*.
AB = 20 cm, correct to 1 significant figure.
BC = 8.3 cm, correct to 2 significant figures.

Calculate the lower bound for the value of $tan\, x^{\circ}$.

.....

(3 marks)

Question 5

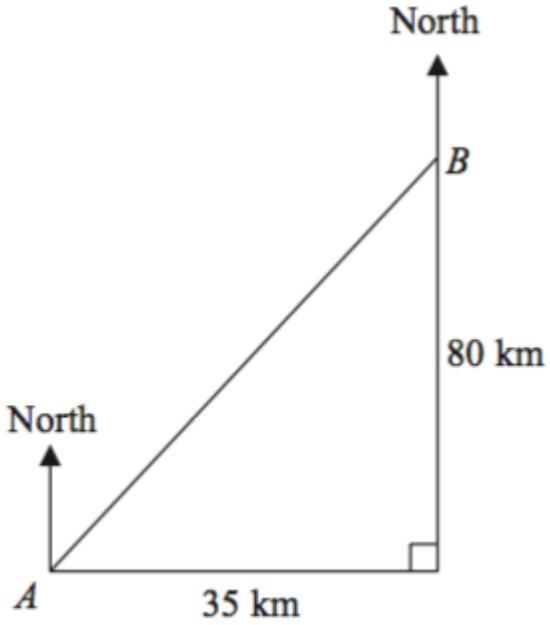


Diagram **NOT** accurately drawn

Town *B* is 35 km east and 80 km north of town *A*.

Work out the bearing of town *A* from town *B*.
Give your answer correct to the nearest degree.

..... °

(4 marks)

Question 6

The diagram shows the positions of two towns, *A* and *B*.

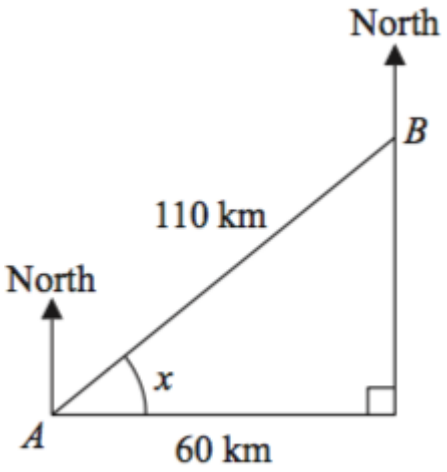


Diagram **NOT** accurately drawn

The distance from *A* to *B* is 110 km.
B is 60 km east of *A*.

Work out the size of angle x .
Give your answer correct to 1 decimal place.

$x =$ ..... °

(3 marks)

Question 7

ABC is a triangle.
The point *D* lies on *AC*.
Angle *BDC* = 90°
BD = 10 cm, *AB* = 15 cm and *DC* = 12.5 cm.

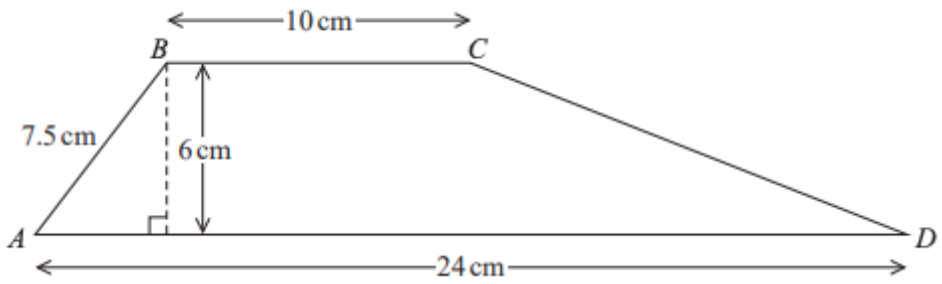
Calculate the size of angle BCD.
Give your answer correct to 1 decimal place.

..... °

(3 marks)

Question 8

$ABCD$ is a trapezium.



Work out the size of angle CDA .
Give your answer correct to 1 decimal place.

angle $CDA =$ ..... °

(5 marks)

Question 9

Here is triangle ABD.

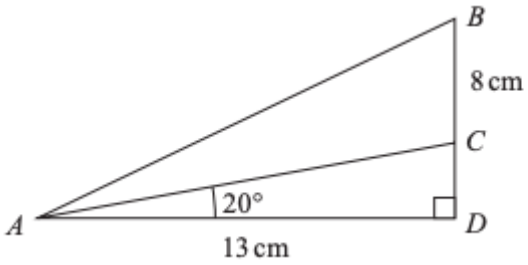


Diagram **NOT** accurately drawn

The point C lies on BD .$AD = 13$ cm $BC = 8$ cm angle $ADB = 90^{\circ}$ angle $CAD = 20^{\circ}$

Calculate the size of angle BAC .
Give your answer correct to 1 decimal place.

..... °

(5 marks)

Question 10

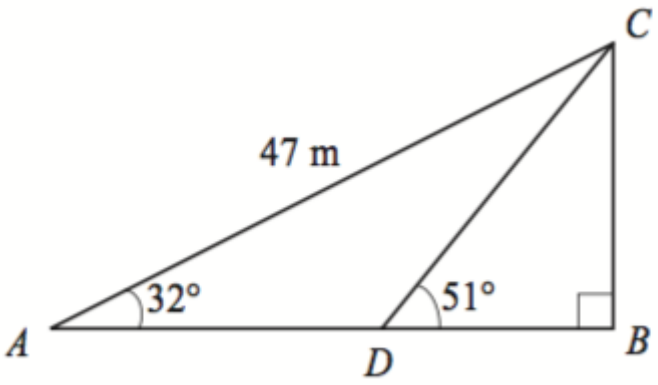


Diagram **NOT** accurately drawn

Triangle ABC is right-angled at B.
Angle BAC = 32°
AC = 47 m.
D is the point on AB such that angle BDC = 51°

Calculate the length of BD.
Give your answer correct to 3 significant figures.

..... m

(5 marks)

Question 11

The diagram shows a trapezium.

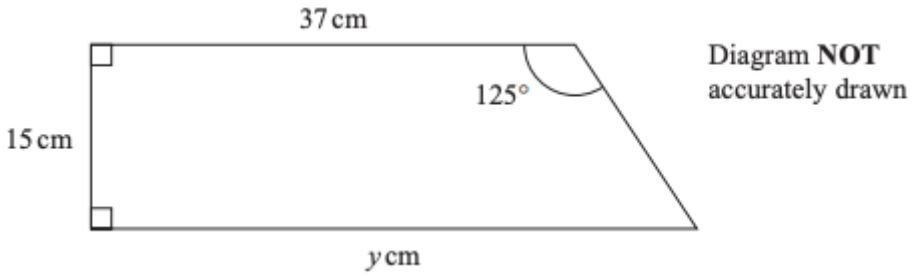


Diagram **NOT** accurately drawn

Work out the value of y .
Give your answer correct to 1 decimal place.

$y =$ ..... cm

(4 marks)

Question 12

ABCD is a parallelogram.
AB = 8.9 cm.
AD = 6.7 cm.
Angle *BAD* = 74°.

Calculate the area of parallelogram *ABCD*.
Give your answer correct to 3 significant figures.

..... cm^2

(3 marks)
