Questions

Q1.

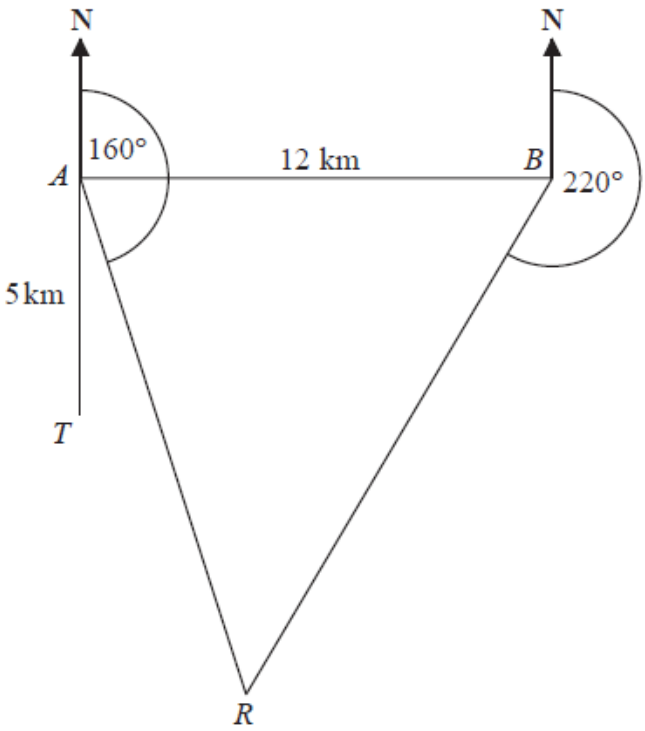

Diagram **NOT** accurately drawn

There is a coastguard station at point *A* and at point *B*.
B is due East of *A*.
The distance from *A* to *B* is 12 km.

There is a rowing boat at point *R*.
R is on a bearing of 160° from A.
R is on a bearing of 220° from B.

There is a speedboat at point *T*.
T is 5 km due South of *A*.

Work out the shortest distance from *T* to *R*.
Give your answer correct to 1 decimal place.
You must show all your working.

.....km

(Total for question = 5 marks)

Q2.

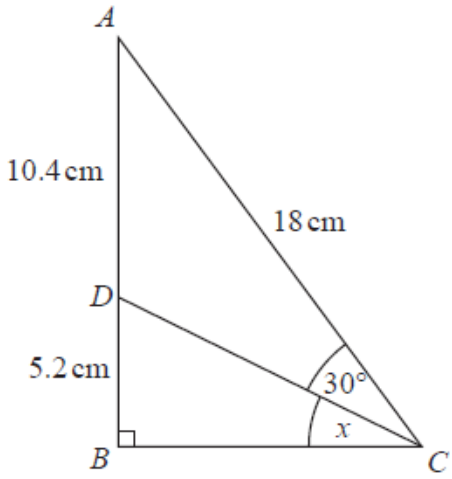

Diagram **NOT** accurately drawn

ABC is a right-angled triangle.
D is a point on *AB*.

Angle *ACD* = 30°
AD = 10.4 cm
DB = 5.2 cm
AC = 18 cm

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

..... °

(Total for question = 4 marks)

Q3.

* The diagram shows the triangle *PQR*.

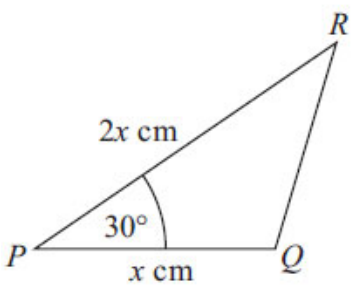

Diagram **NOT** accurately drawn

PQ= *x*cm
PR= 2*x*cm
Angle *QPR*= 30°

The area of triangle *PQR*= *A*cm^2

Show that $x = \sqrt{2A}$

(Total for Question is 3 marks)

Q4. The diagram shows triangle *LMN*.

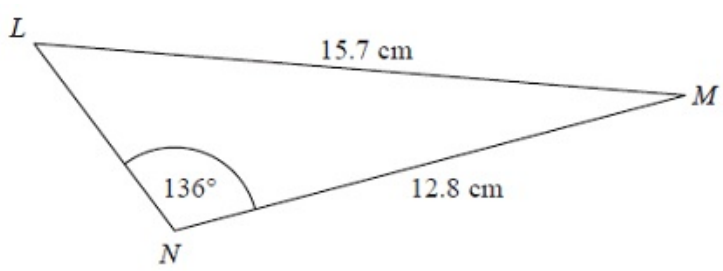

Diagram **NOT** accurately drawn

Calculate the length of *LN*.

Give your answer correct to 3 significant figures.

..... cm

(Total for Question is 5 marks)

Q5.

ABC is a triangle.

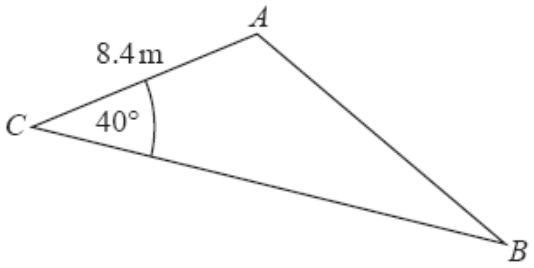

Diagram **NOT** accurately drawn

AC = 8.4m
Angle ACB = 40°

The area of the triangle = 100m^2.

Work out the length of AB.
Give your answer correct to 3 significant figures.
You must show all your working.

..... m

(Total for question = 5 marks)

Q6.

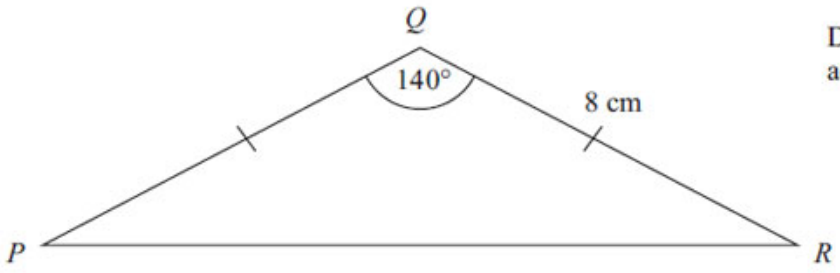

Diagram **NOT** accurately drawn

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

. . . . . cm

(Total for Question is 3 marks)

Q7.

Jerry wants to cover a triangular field, *ABC*, with fertiliser.

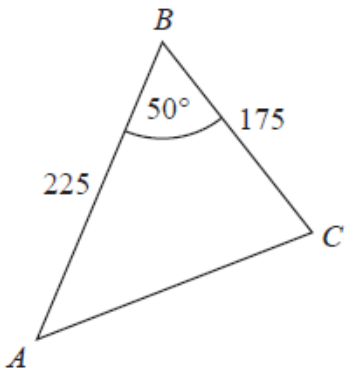

Diagram **NOT** accurately drawn

Here are the measurements Jerry makes

angle *ABC* = 50° correct to the nearest degree,
BA = 225 m correct to the nearest 5 m,
BC = 175 m correct to the nearest 5 m.

Work out the upper bound for the area of the field.
You must show your working.

.....m^2

(Total for Question is 3 marks)

Q8.

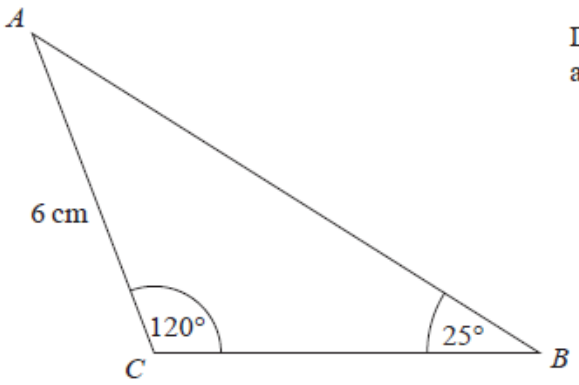

Diagram **NOT** accurately drawn

In triangle *ABC*,

AC = 6 cm
Angle ACB = 120°
Angle ABC = 25°

Work out the area of triangle ABC.
Give your answer correct to 1 decimal place.
You must show all your working.

..... cm^2

(Total for question = 4 marks)

Q9.

ABC is an acute angled triangle.

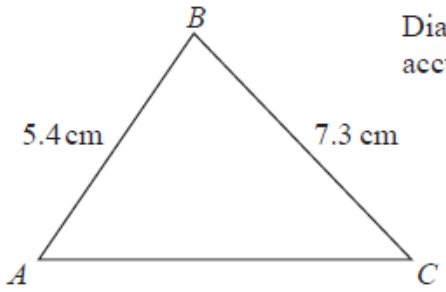

Diagram **NOT** accurately drawn

The area of triangle ABC is 19 cm^2.

Work out the size of angle ACB.
Give your answer correct to 3 significant figures.

..... °

(Total for question = 6 marks)

Q10.

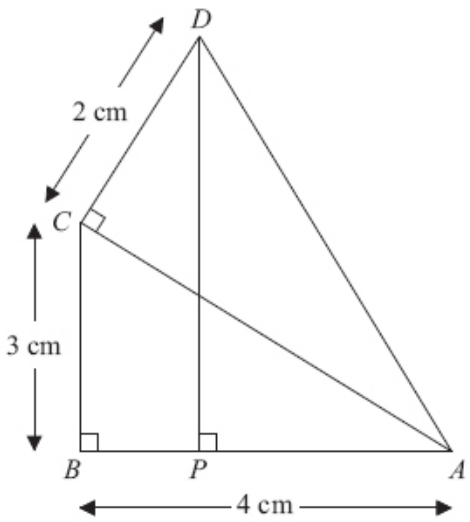

Diagram **NOT** accurately drawn

In the diagram,

ABC, *ACD*and *APD*are right-angled triangles.
AB= 4 cm.
BC= 3 cm.
CD= 2 cm.

Work out the length of *DP*.

. . . . . .cm

(Total for Question is 5 marks)