



JP Maths

Revision



Attempt the paper
before watching the
solutions!

[https://www.youtube.com/
@JPMathsRevision](https://www.youtube.com/@JPMathsRevision)



HIGHER TIER

Area of a Triangle using $A = \frac{1}{2}ab\sin(C)$



INSTRUCTIONS

- Use **black ink** or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working.**
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.



INFORMATION

- The marks for **each** question are shown in brackets– *use this as a guide as to how much time to spend on each question.*



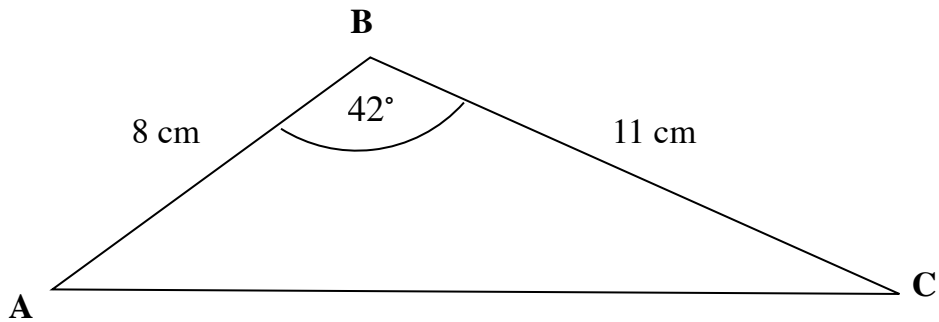
ADVICE

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.



You've got this!

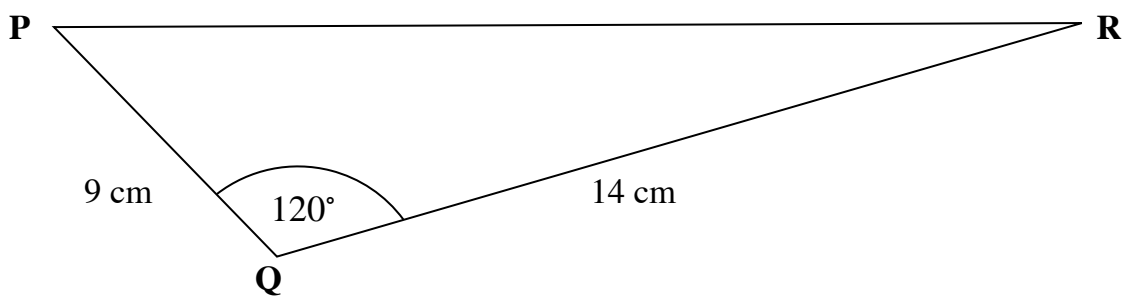
1. Calculate the area of triangle ABC.



.....
cm²

(Total for Question 1 is 2 marks)

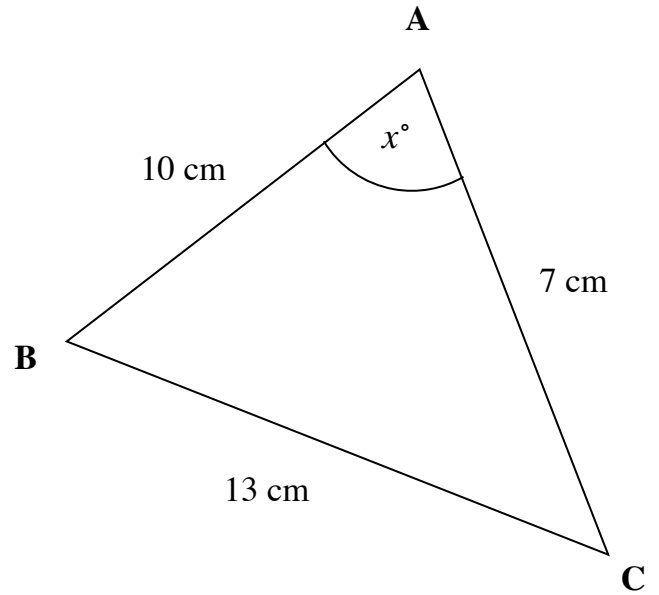
2. Calculate the area of triangle PQR.



.....
cm²

(Total for Question 2 is 2 marks)

3. (a) Work out the size of angle BAC.



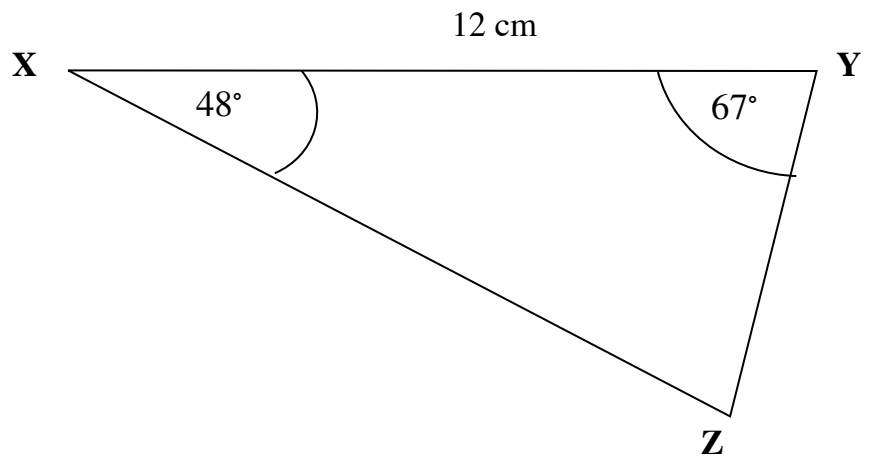
.....
(3)

(b) Hence, work out the area of triangle ABC.

..... cm^2
(2)

(Total for Question 3 is 5 marks)

4. (a) Work out the size of the side YZ.



..... cm
(3)

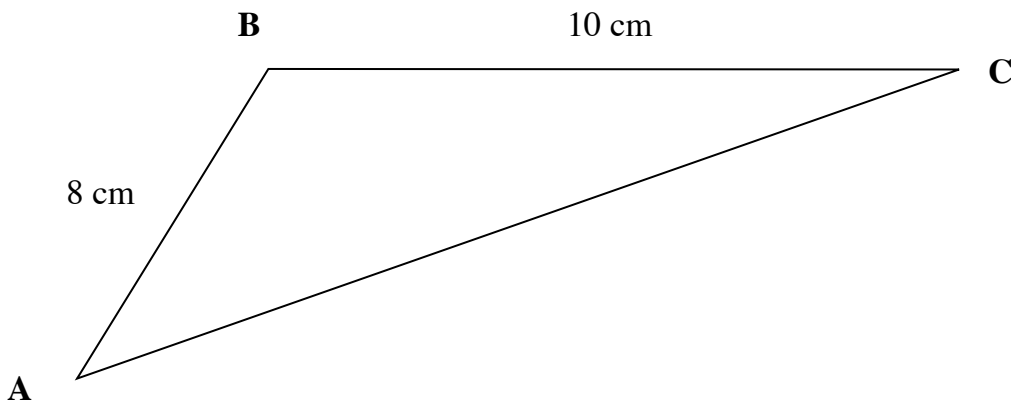
(b) Hence, work out the area of triangle XYZ.

..... cm²
(2)

(Total for Question 4 is 5 marks)

5. The area of triangle ABC is 30cm^2 .

(a) Work out the size of angle ABC.



.....
(4)

(b) Hence, work out the length of the side AC.

..... cm
(3)

(Total for Question 5 is 7 marks)

6. The area of triangle ABC is 42cm^2 .

One side is 7cm and another is 12cm .

Is triangle ABC right angled?

You must give reason for your answer.

(Total for Question 6 is 4 marks)

7. The area of a triangle is 24 cm^2 .

Two sides are $x \text{ cm}$ and 8 cm .

The angle between them is 30° .

Find the length of the third side.

.....
cm

(Total for Question 7 is 5 marks)
