Name: ___________________________

GCSE (1 – 9)
Finding the Area of Any Triangle

Instructions

• Use black ink or ball-point pen.
• Answer all questions.
• Answer the questions in the spaces provided – there may be more space than you need.
• Diagrams are NOT accurately drawn, unless otherwise indicated.
• You must show all your working out.

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

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Work out the area of the triangle.
Give your answer to 1 decimal place.

\[ \text{Area} = \frac{1}{2} \times 13 \times 12 \times \sin(120^\circ) \]

\[ \text{Area} = \frac{1}{2} \times 13 \times 12 \times \frac{\sqrt{3}}{2} \]

\[ \text{Area} = 78 \times \frac{\sqrt{3}}{2} \]

\[ \text{Area} = 132.2 \text{ cm}^2 \]

(Total for question 1 is 2 marks)

Work out the area of the triangle.
Give your answer to 3 significant figures.

\[ \text{Area} = \frac{1}{2} \times 5 \times 8 \times \sin(41^\circ) \]

\[ \text{Area} = \frac{1}{2} \times 5 \times 8 \times 0.656 \]

\[ \text{Area} = 13.6 \text{ m}^2 \]

(Total for question 2 is 2 marks)
Work out the area of the triangle.
Give your answer to 3 significant figures.

\( \text{.................. cm}^2 \)
(Total for question 3 is 2 marks)

Work out the area of the triangle.

\( \text{.................. m}^2 \)
(Total for question 4 is 2 marks)
5

The area of the triangle is $70\text{cm}^2$
Work out the value of $x$.
Give your answer to 1 decimal place.

6

The area of the triangle is $100\text{m}^2$
Work out the value of $x$.
Give your answer to 3 significant figures.
The area of the triangle is 105cm²
Work out the value of \( x \).
Give your answer to 1 decimal place.

The area of the triangle is 15m²
Work out the value of \( x \).
Give your answer to 3 significant figures.
The area of the triangle is \(15\sqrt{3}\) cm\(^2\).
Work out the value of \(x\).
The ratio of the length BC to the length AC is 2:1
The area of the triangle is 50cm²
Work out the value of $x$. 

(Total for question 10 is 4 marks)
The area of the triangle is $25 \text{ cm}^2$.
Work out the value of $x$.
Give your answer to 3 significant figures.