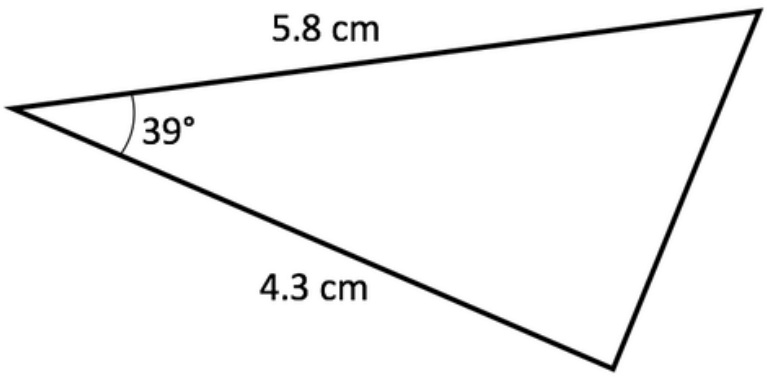
Area of a Triangle using Sine

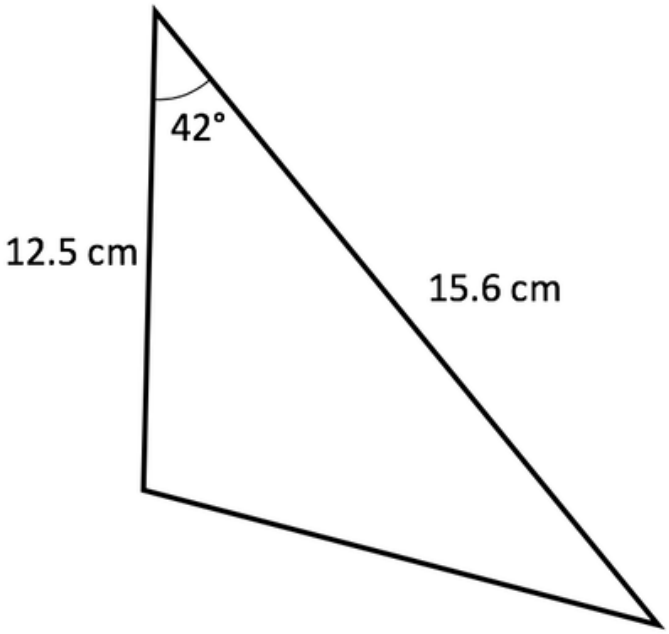
Part 1

Calculate the areas of the following triangles. Give your answers to 1 decimal place.

1)



2)



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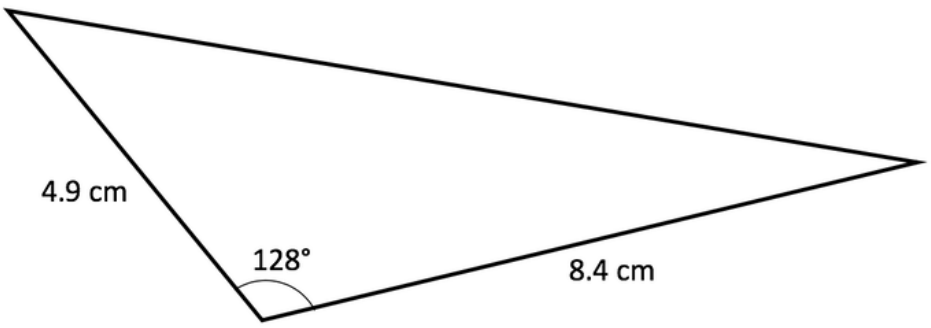

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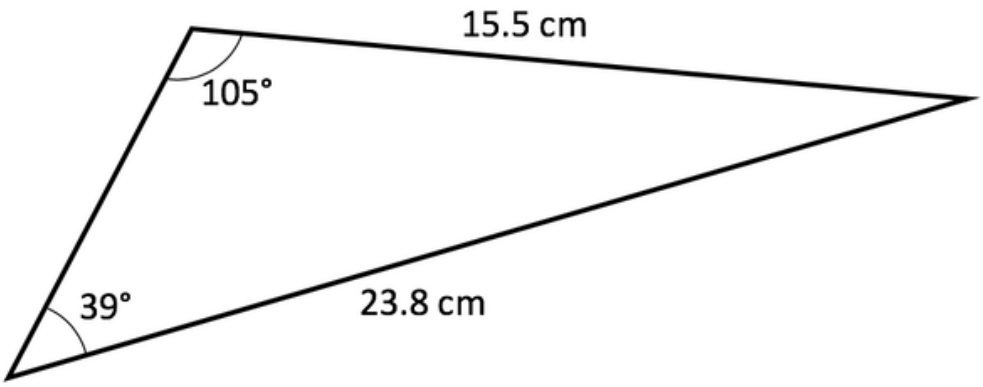
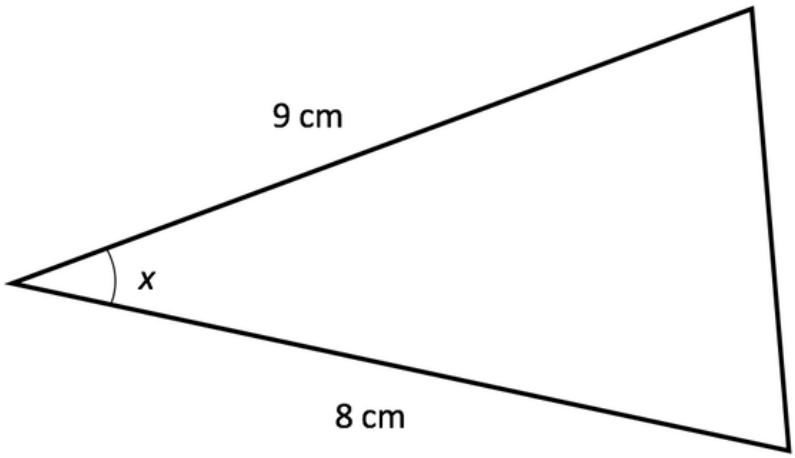
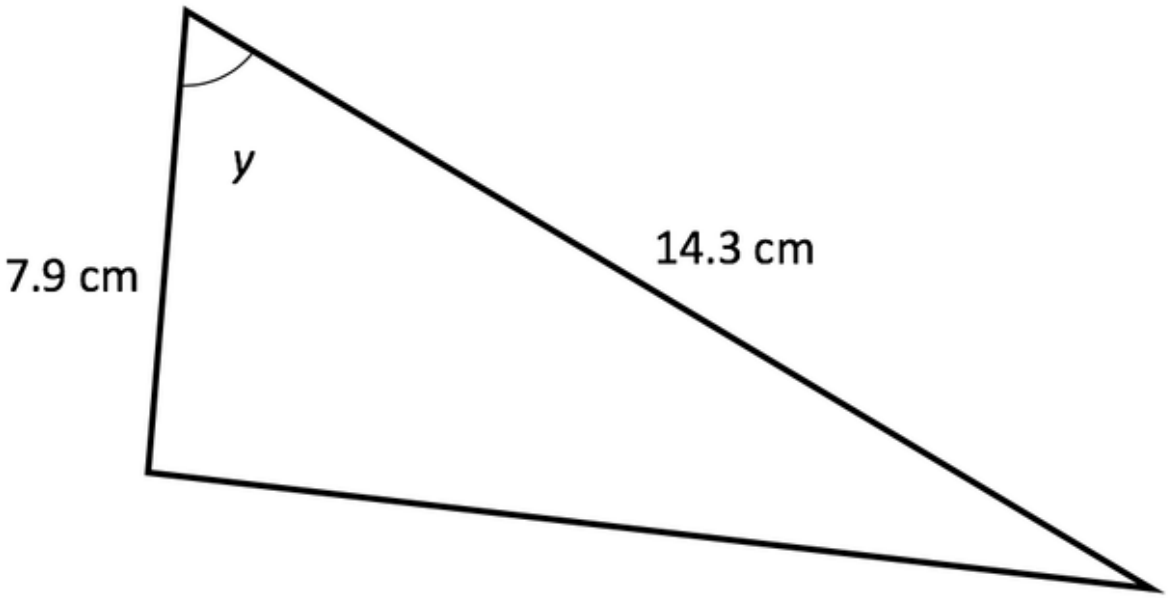


Part 2

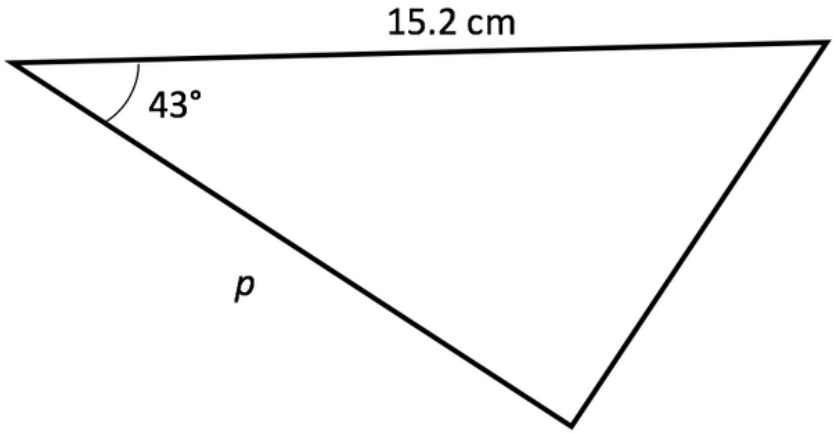
1) The area of the triangle below is 24 cm^2. *x* is an acute angle. What is the size of the angle *x*? Give your answer to the nearest degree.



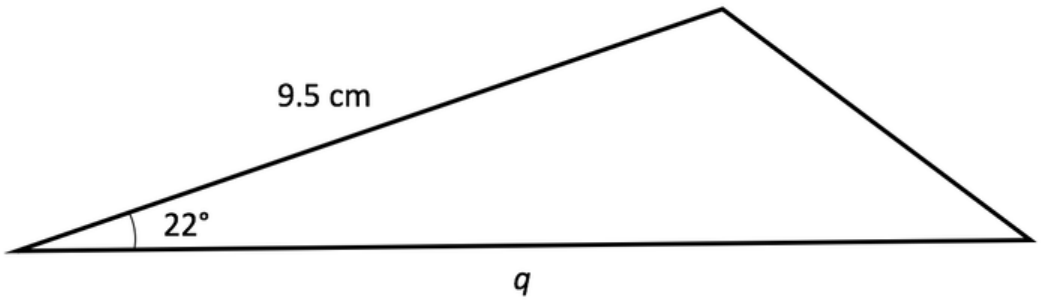
2) The area of the triangle below is 45 cm^2. *y* is an acute angle. What is the size of the angle *y*? Give your answer to the nearest degree.



3) The area of the triangle below is 57 cm^2. What is the length of p? Give your answer to the nearest integer.



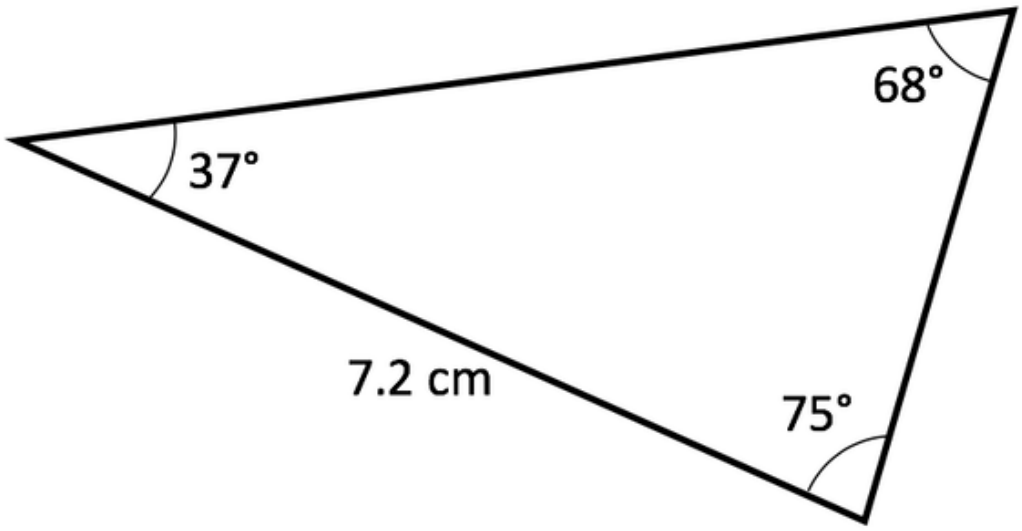
4) The area of the triangle below is 24.2 cm^2. What is the length of q? Give your answer to one decimal place.



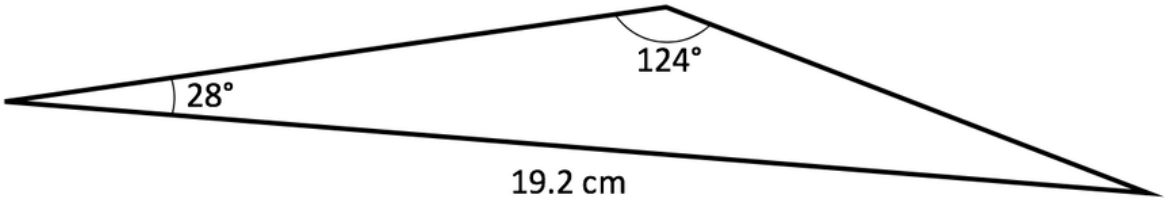
Part 3

Calculate the areas of the following triangles. Give your answer to one decimal place. You may need to use the sine or cosine rule to answer these questions.

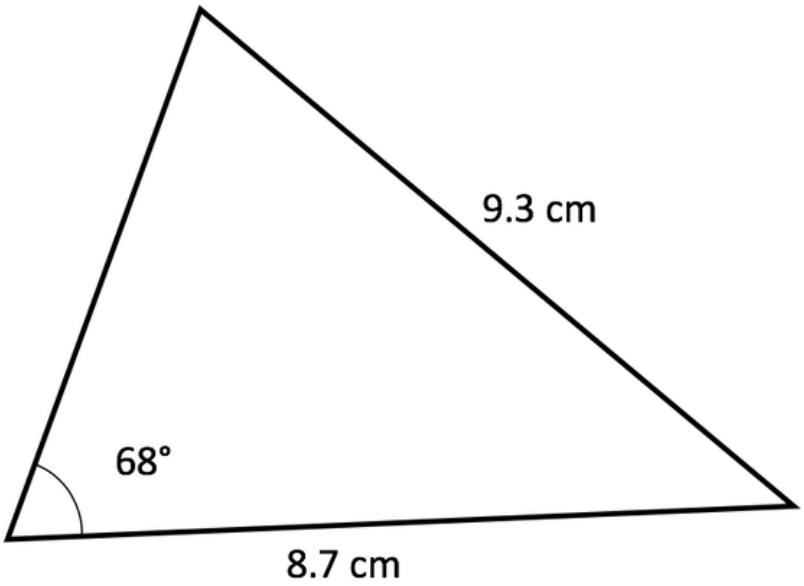
1)



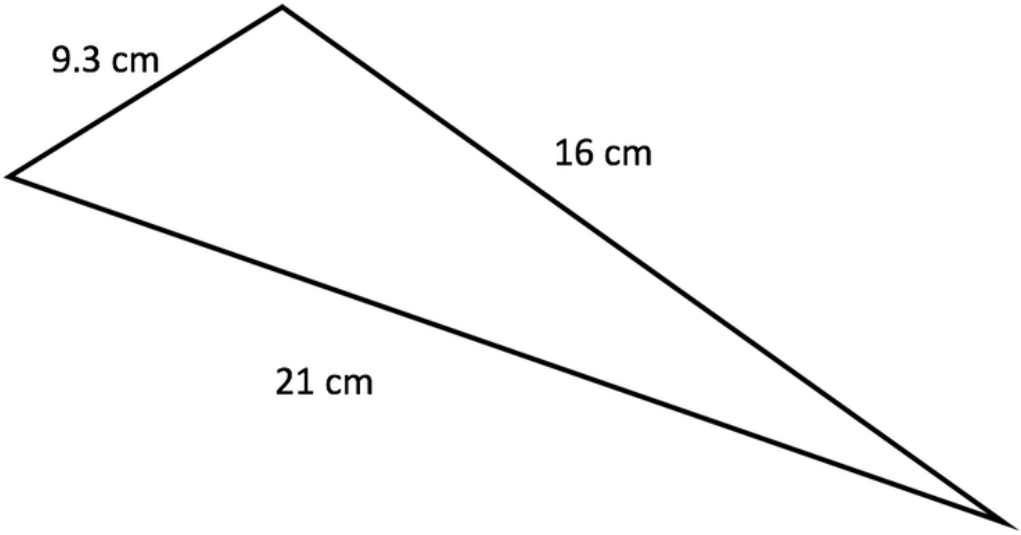
2)



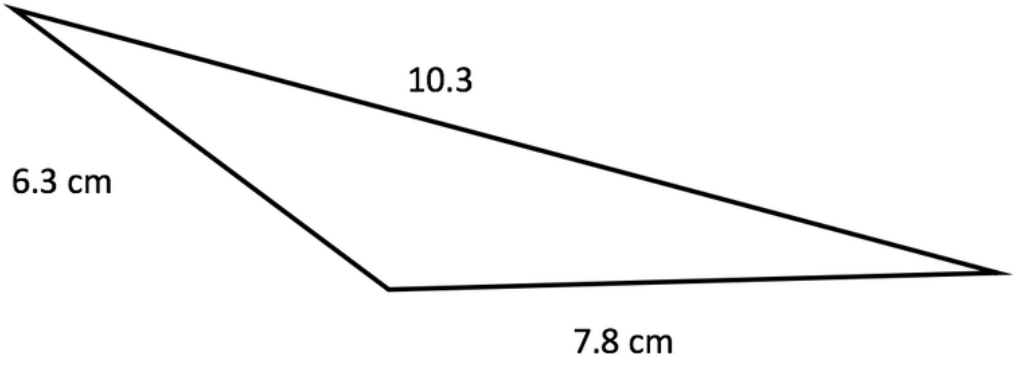
3)



4)



5)



Answers

Working Link

Part 1

1) 7.8 cm^2

2) 65.2 cm^2

3) 16.2 cm^2

4) 108.4 cm^2

Part 2

1) 42°

2) 53°

3) 11 cm

4) 13.6 cm

Part 3

Accept answers that are ±0.1.

1) 16.5 cm^2

2) 49 cm^2

3) 31.8 cm^2

4) 70.2 cm^2

5) 24.5 cm^2