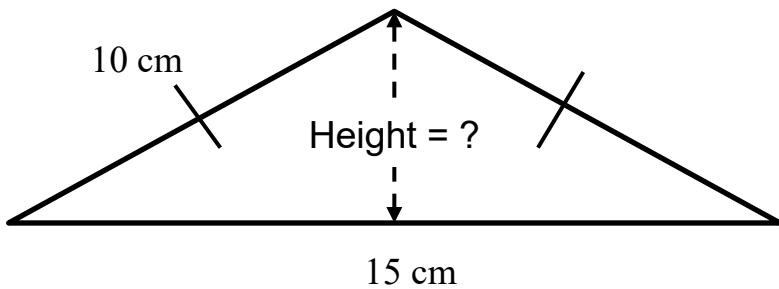
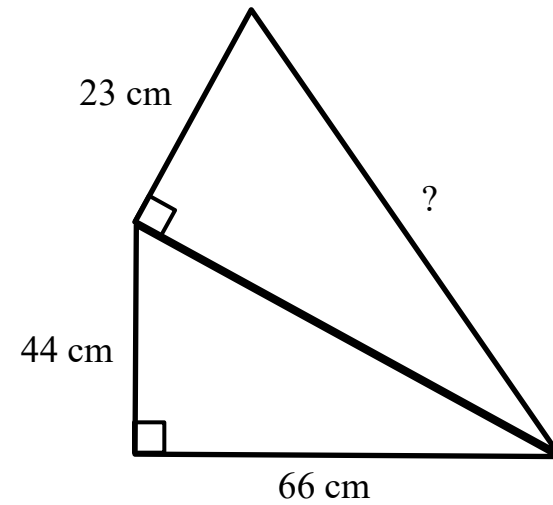
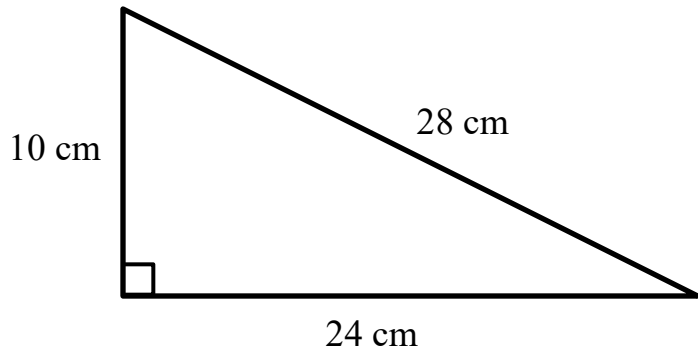


This file contains;

- 1.This slide
- 2.One slide of questions based on using Pythagoras
- 3.One slide of questions based on using standard trigonometry
- 4.One slide of questions based on using the cosine rule
- 5.One slide of questions based on using the sine rule
- 6.One slide of questions based on using the sine rule for area
- 7.One slide containing answers
- 8.One slide containing a selection of questions from the others
- 9.One slide of answers for the selected questions

Slides aren't titled to make students think further.

Is this triangle drawn accurately?

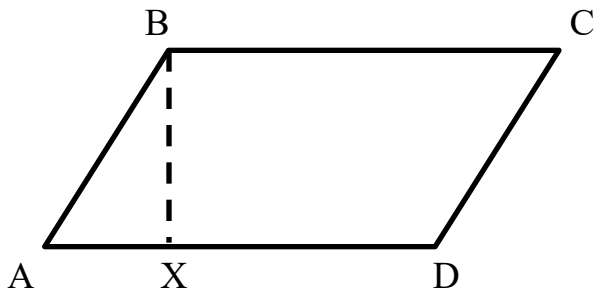
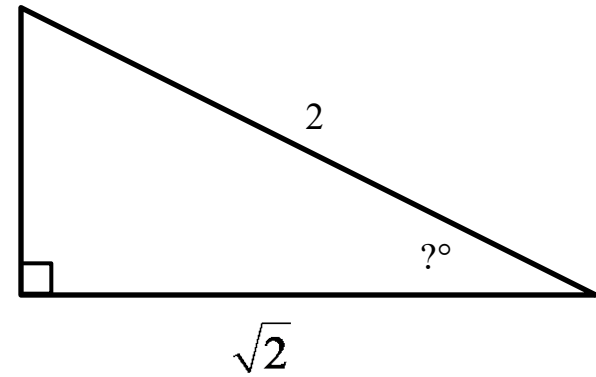
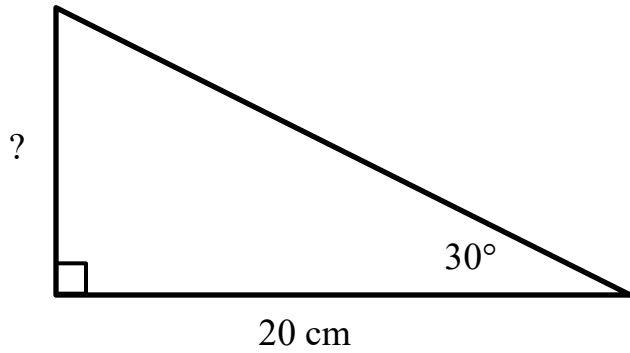


\* not a right-angled triangle



What is the maximum length umbrella that can fit into a suitcase of these dimensions?

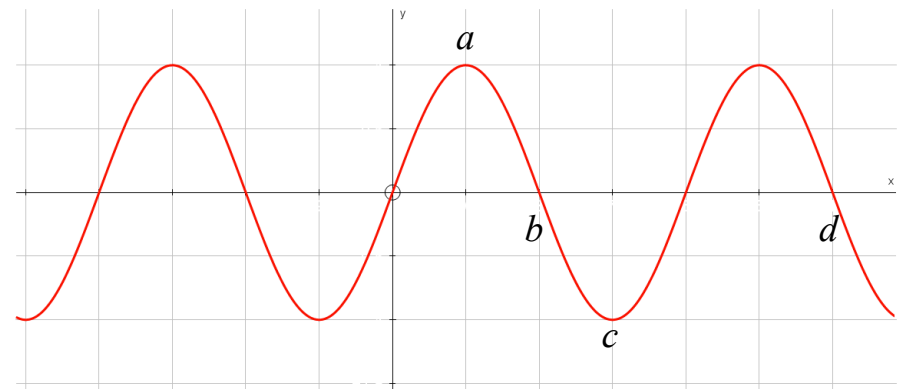
66 cm × 44 cm × 23 cm

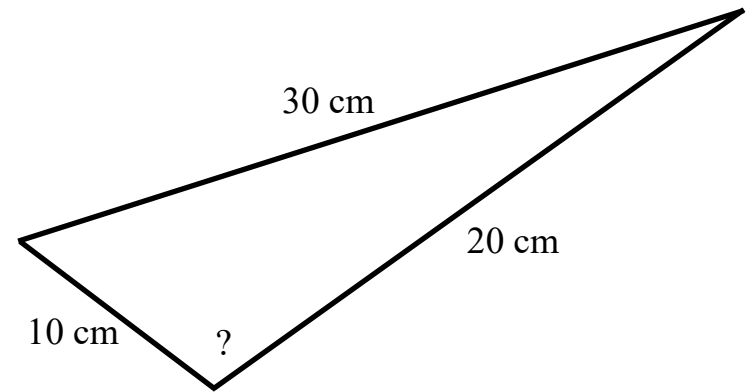
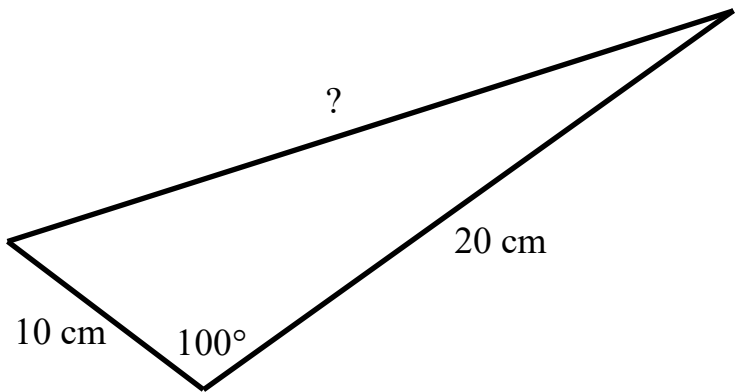


ABCD is a parallelogram.  
 $AX = 4\text{ cm}$   $BC = 8\text{ cm}$   $\angle BAD = 48^\circ$   
 Calculate the length of the longer diagonal.

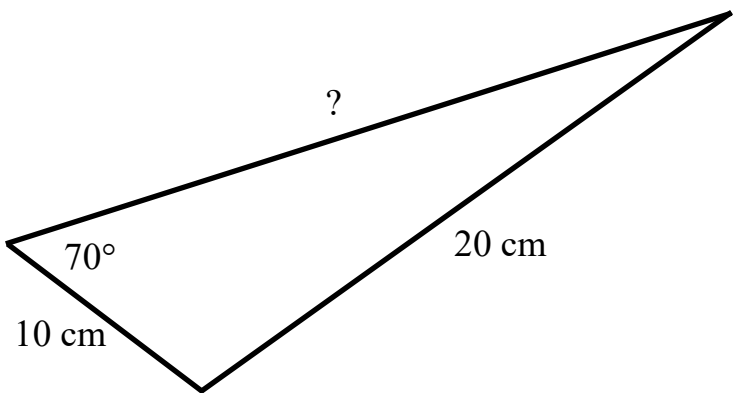
**12.27 cm**

The graph of  $y = \sin x$  is shown below.  
 What are the coordinates of  $a$ ,  $b$ ,  $c$  and  $d$ ?

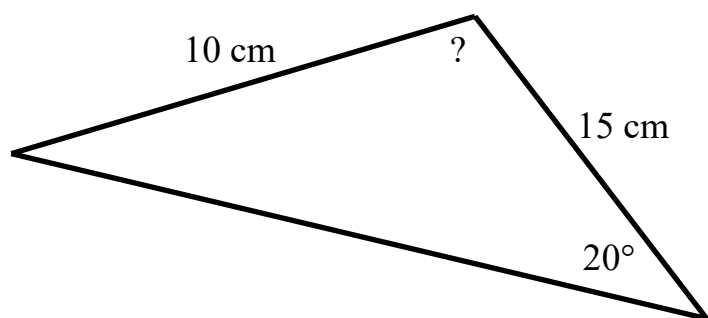
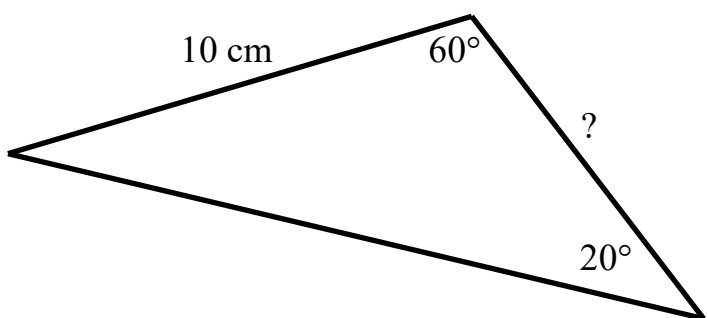
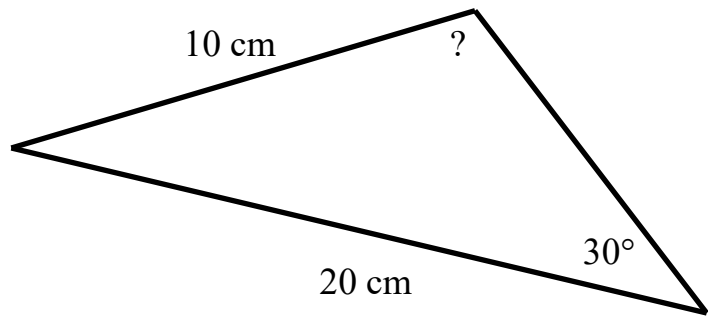
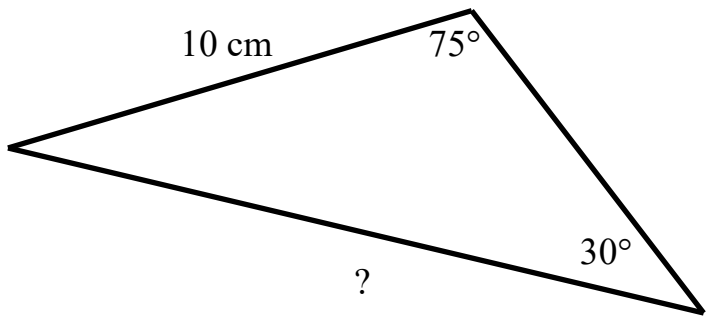


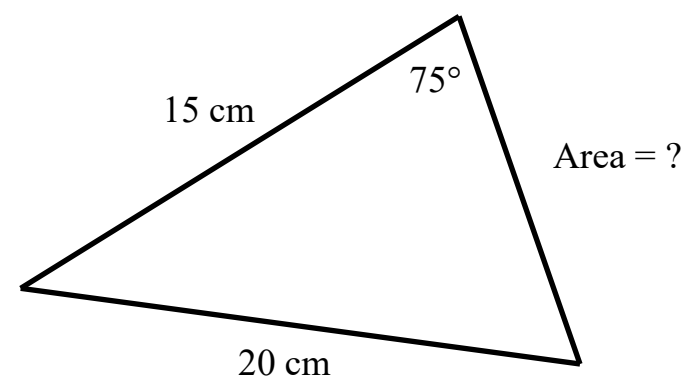
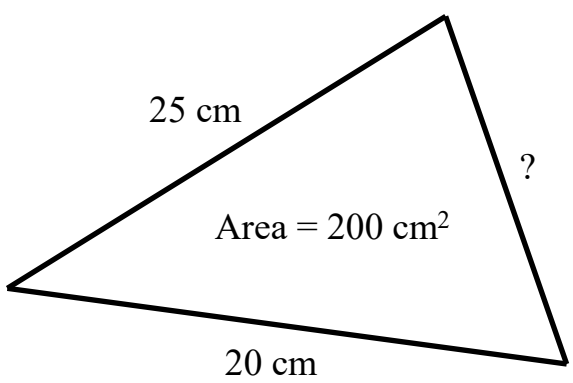
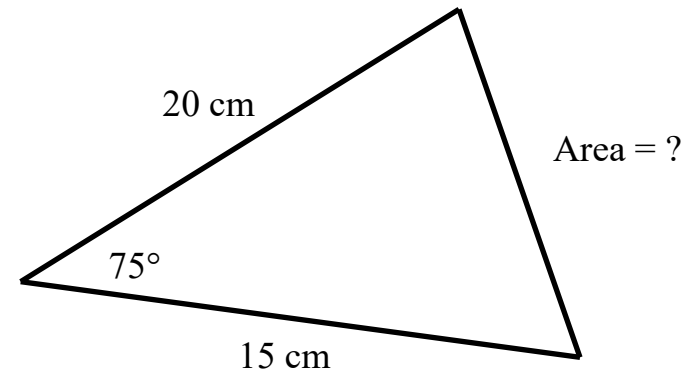
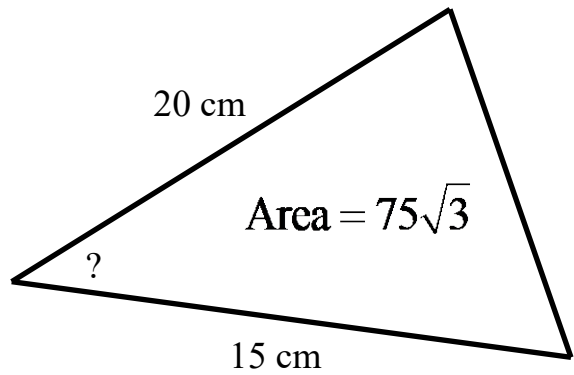


Drawn accurately?



In the triangle PQR,  
 $PQ = 4 \text{ cm}$   $QR = 5 \text{ cm}$   $\angle PQR = 225^\circ$   
Calculate the length of PR.





Give both possible answers

# Answers

## Pythagoras (the one with the suitcase)

- 1.No,  $10^2 + 24^2 \neq 28^2 \therefore$  non RA.
- 2.82.59 cm
3. $(5\sqrt{7})/2 \approx 6.61$
- 4.82.59 cm (same answer as question 2)

## Standard Trig (the one with the sin graph)

1. $(20\sqrt{3})/3 \approx 11.55$
2. $45^\circ$
- 3.12.27 cm
4. $(90, 1), (180, 0), (270, -1), (540, 0)$

## Cosine Rule (one with the worded question)

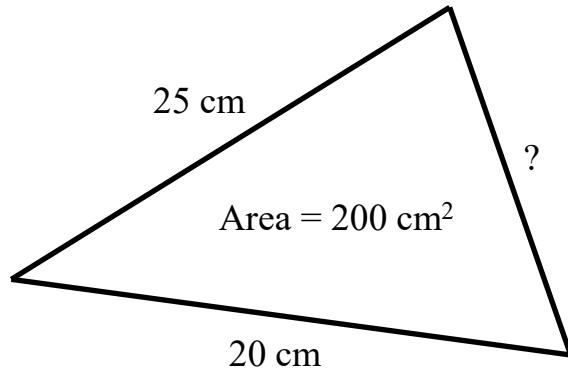
- 1.23.86 cm
2. $180^\circ \therefore$  not a triangle (check the lengths)
- 3.21.07 cm
4. $(41+20\sqrt{2})^{1/2} \approx 8.32$  cm

## Sine Rule

1. $5\sqrt{6}+5\sqrt{2} \approx 19.31$  cm
2. $90^\circ$
- 3.19.69 cm
4. $129.13^\circ$

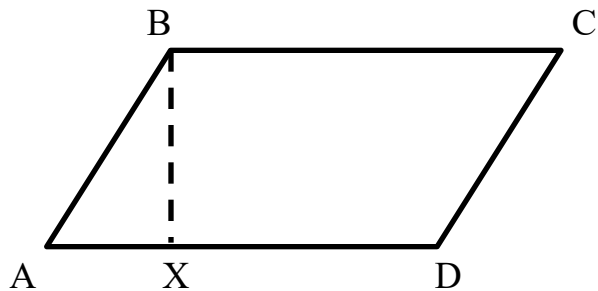
## Sine Rule for Area (one about areas)

1. $60^\circ$
2. $(75\sqrt{6}+75\sqrt{2})/2 \approx 144.89$  cm<sup>2</sup>
- 3.20.615 cm and 40.31 cm
- 4.128 cm<sup>2</sup>



Give both possible answers

In the triangle PQR,  
 $PQ = 4 \text{ cm}$   $QR = 5 \text{ cm}$   $\angle PQR = 225^\circ$   
 Calculate the length of PR.



ABCD is a parallelogram.

$AX = 4 \text{ cm}$   $BC = 8 \text{ cm}$   $\angle BAD = 48^\circ$

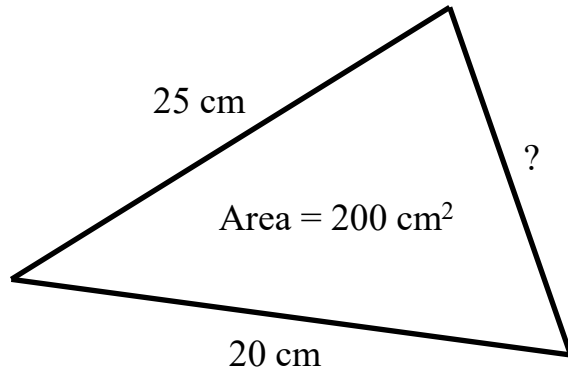
Calculate the length of the longer diagonal.



What is the maximum length  
 umbrella that can fit into a suitcase  
 of these dimensions?

$66 \text{ cm} \times 44 \text{ cm} \times 23 \text{ cm}$

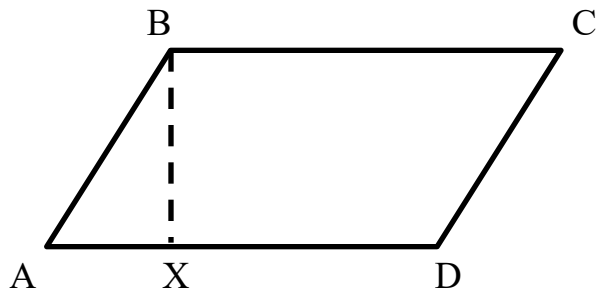
20.615 cm and 40.31 cm



Give both possible answers

In the triangle PQR,  
PQ = 4 cm QR = 5 cm  $\angle PQR = 225^\circ$   
Calculate the length of PR.

$$(41+20\sqrt{2})^{1/2} \approx 8.32 \text{ cm}$$



ABCD is a parallelogram.

AX = 4 cm BC = 8 cm  $\angle BAD = 48^\circ$

Calculate the length of the longer diagonal.

$$12.27 \text{ cm}$$



82.59 cm

What is the maximum length  
umbrella that can fit into a suitcase  
of these dimensions?

$$66 \text{ cm} \times 44 \text{ cm} \times 23 \text{ cm}$$