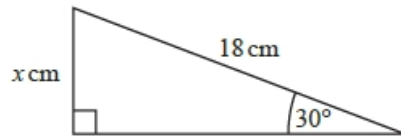


## G155 Trigonometry

Q1.

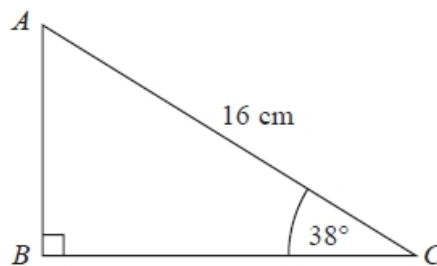


Work out the value of  $x$ .

.....  
**(Total for question = 2 marks)**

Q2.

$ABC$  is a right-angled triangle.



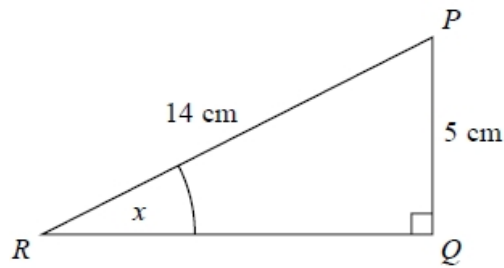
Calculate the length of  $AB$ .  
Give your answer correct to 2 decimal places.

..... cm

**(Total for question = 2 marks)**

**Q3.**

$PQR$  is a right-angled triangle.



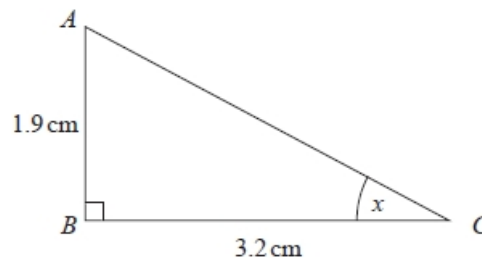
Work out the size of the angle marked  $x$ .  
Give your answer correct to 1 decimal place.

.....°

**(Total for question = 2 marks)**

**Q4.**

$ABC$  is a right-angled triangle.



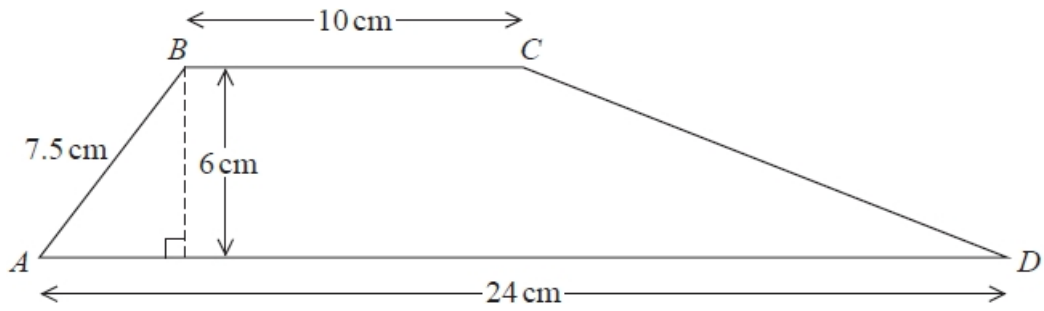
Work out the size of the angle marked  $x$ .  
Give your answer correct to 1 decimal place.

.....°

**(Total for question = 2 marks)**

**Q5.**

$ABCD$  is a trapezium.



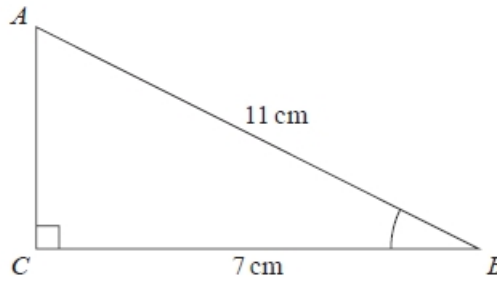
Work out the size of angle  $CDA$ .  
Give your answer correct to 1 decimal place.

..... °

**(Total for question = 5 marks)**

**Q6.**

$ABC$  is a right-angled triangle.



(a) Work out the size of angle  $ABC$ .

Give your answer correct to 1 decimal place.

..... °  
(2)

The length of the side  $AB$  is reduced by  $1\text{ cm}$ .

The length of the side  $BC$  is still  $7\text{ cm}$ .

Angle  $ACB$  is still  $90^\circ$

(b) Will the value of  $\cos ABC$  increase or decrease?

You must give a reason for your answer.

.....  
.....

(1)

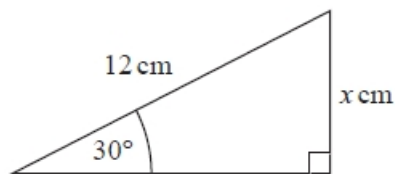
**(Total for question = 3 marks)**

**Q7.**

(a) Write down the exact value of  $\cos 30^\circ$

.....  
(1)

(b)



Given that  $\sin 30^\circ = 0.5$ ,  
work out the value of  $x$ .

.....  
(2)  
(Total for question is 3 marks)

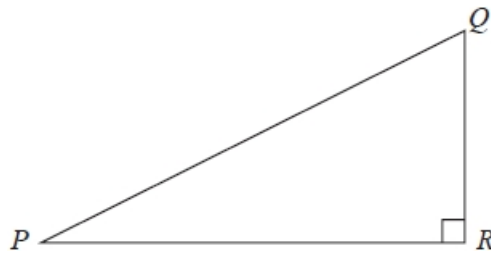
**Q8.**

Find the exact value of  $\tan 30^\circ \times \sin 60^\circ$   
Give your answer in its simplest form.

.....  
(Total for question = 2 marks)

**Q9.**

Here is triangle  $PQR$ .



The length of  $QR$  is 60% of the length of  $PR$ .

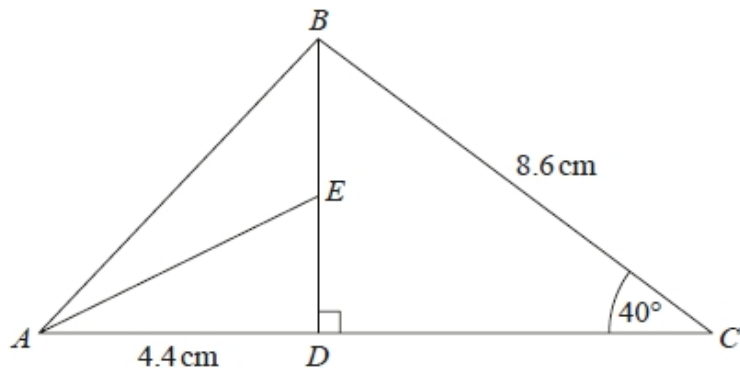
Find the value of  $\sin QPR$ .

Give your answer correct to 3 significant figures.

.....  
**(Total for question = 3 marks)**

**Q10.**

The diagram shows triangle  $ABC$ .



$ADC$  and  $DEB$  are straight lines.

$$AD = 4.4 \text{ cm}$$

$$BC = 8.6 \text{ cm}$$

$E$  is the midpoint of  $DB$ .

$$\text{Angle } CDB = 90^\circ$$

$$\text{Angle } DCB = 40^\circ$$

Work out the size of angle  $EAD$ .

Give your answer correct to 1 decimal place.

You must show all your working.

.....<sup>o</sup>

**(Total for question = 4 marks)**