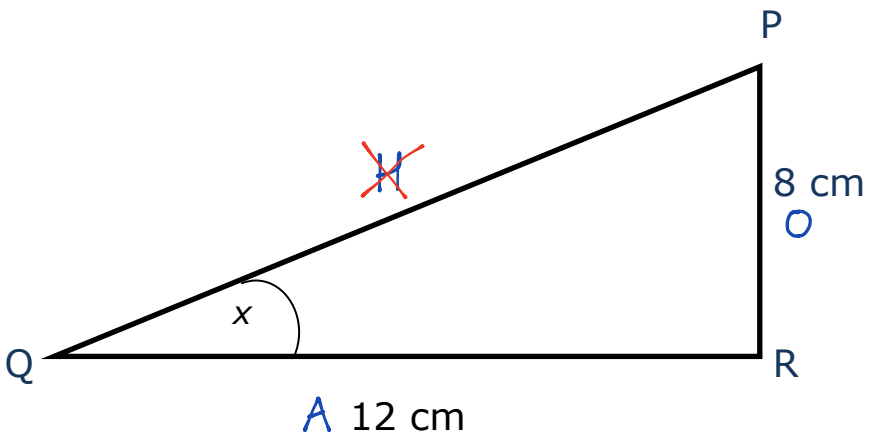
PQR is a right-angled triangle.



PR = 8 cm.

QR = 12 cm.

Find the size of the angle marked *x*. Give your answer correct to 1 decimal place.

$\tan x = \frac{8}{12}$

$x = \tan^{-1}\frac{8}{12}$

$= 33.690067\ldots$

$= 33.7°$

(3)

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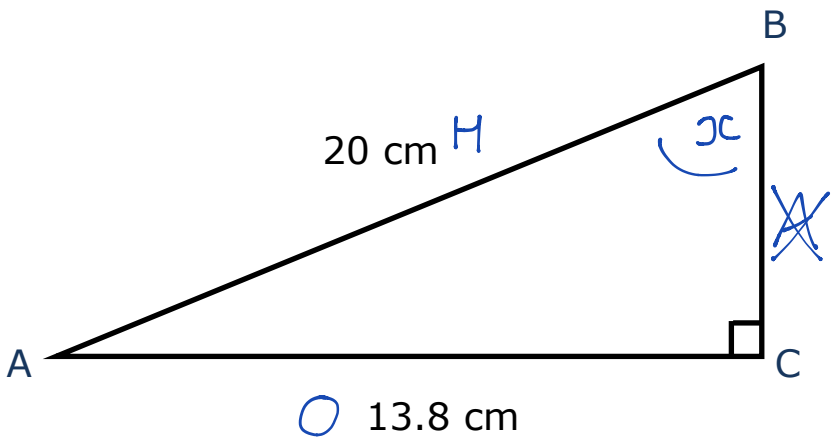
ABC is a right-angled triangle.



AB = 20 cm.

AC = 13.8 cm.

Find the size of the angle ABC. Give your answer correct to 3 significant figures.

SOH CAH TOA

$\sin x = \frac{13.8}{20}$

$x = \sin^{-1} \frac{13.8}{20}$

$= 43.63010887$

$= 43.6°$

(3)

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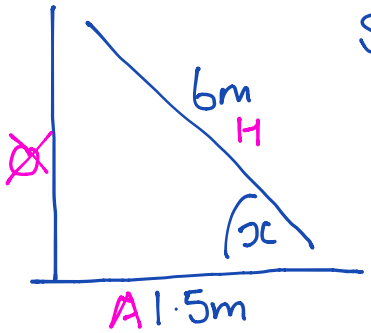
A 6 metre ladder is used to clean windows. It must stand 1.5 metres from the base of a wall on horizontal ground. In order for the window cleaner to be able to safely use the ladder, the angle between the ground and the ladder cannot exceed 75°.

Is the ladder safe to use?



SOH CAH TOA

$\cos x = \frac{1.5}{6}$

$x = \cos^{-1}\frac{1.5}{6}$

$= 75.5°$

so the ladder is not safe to use.

(4)

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