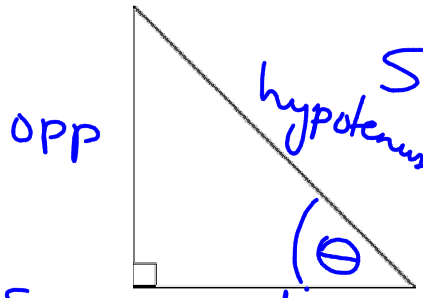
Trigonometry Review

SOH CAH TOA

$\sin\theta = \frac{O}{H}$ $\cos\theta = \frac{A}{H}$ $\tan\theta = \frac{O}{A}$



$a^2 + b^2 = c^2$

Sum of angles is 180°.

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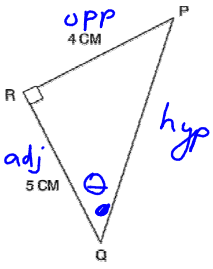


SOH CAH TOA

Calculate tan Q and <Q

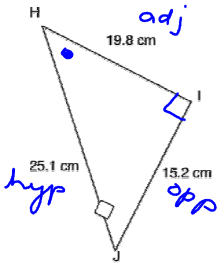
$\tan\theta = \frac{O}{A}$

$\tan Q = \frac{4}{5}$

$\angle Q = \tan^{-1}\left(\frac{4}{5}\right) = 39°$

Angles are always rounded to the nearest whole degree.

Calculate tan P and <P



SOH

Calculate sin H and <H

$\sin\theta = \frac{O}{H}$

$\sin H = \frac{15.2}{25.1}$ 37°

CAH

Calculate Cos H and <H

$\cos\theta = \frac{A}{H}$

$\cos H = \frac{19.8}{25.1}$ 38°

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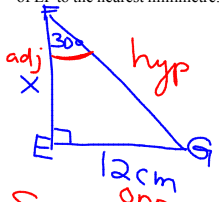
SOH CAH TOA

In ΔEFG, <E = 90°, <F = 30° and EG = 12.0 cm. Determine the length of EF to the nearest millimetre.



$\tan\theta = \frac{o}{a}$

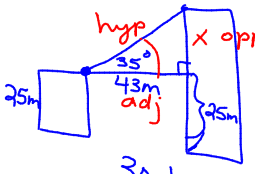
$\tan 30° = \frac{12}{x}$

$x = \frac{12}{\tan 30°}$

$x = 20.8\text{cm}$

Sides are always rounded to 1 decimal place.

From the top of a building 25m tall, the angle of elevation to the top of a taller building is 35°. the distance between the buildings is 43m. Determine the height of the taller building.



$\tan\theta = \frac{o}{a}$

$\tan 35 = \frac{x}{43}$

$(\tan 35)(43) = x$

$x = 30.1\text{m}$

$30.1\text{m} + 25\text{m} = 55.1\text{m}$

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$\tan 30° = \frac{12}{x}$ ←

$(\tan 30) \cdot x = 12$

$x = \frac{12}{\tan 30}$ ←

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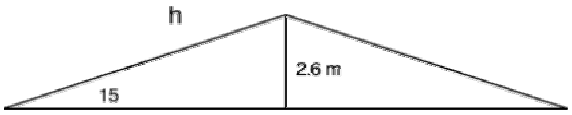
The pitch of a roof is 15^{o} and its rise is 2.6 m. Determine the measure of the *slant height*, *h*, to the nearest cm.



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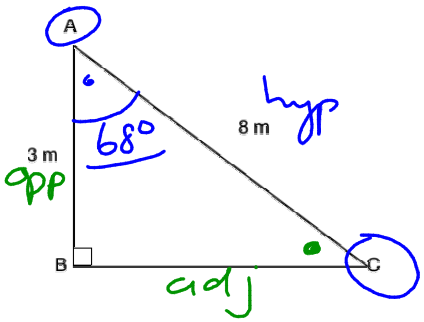

Determine the measures of the two acute angles to the nearest degree

$\cos A = \frac{a}{h}$

$\cos A = \frac{3}{8}$

$\angle A = \cos^{-1}\left(\frac{3}{8}\right)$

$\angle A = 68°$

$\sin C = \frac{o}{h}$

$\sin C = \frac{3}{8}$

$C = \sin^{-1}\left(\frac{3}{8}\right)$

$C = 22°$

Determine the length of BC to the nearest tenth of a metre

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Pg. 457
5, 6, odds
10, 12
Pg. 464
4, 5 odds
8, 9

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