

Trig Exact Values - www.m4ths.com – SB!

Non- Calc with full workings shown!

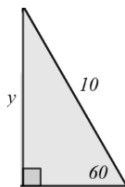
(1) Complete the table below for the trig exact values. Give each in their simplest form.

	0°	30°	45°	60°	90°
$\sin x$					
$\cos x$					
$\tan x$					

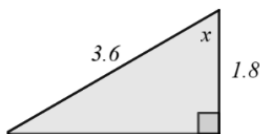
(2) Show that $\cos 60 + \sin 30$ is an integer.

(3) Show that $\sin 60 - \cos 30 = 0$

(4) Use SOHCAHTOA to show that the value of $y = 5\sqrt{3}$ in the triangle below.



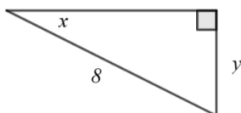
(5) Without a calculator, find the size of angle x showing full workings.



(6) Fully simplify $\cos 45 \times \sqrt{8}$

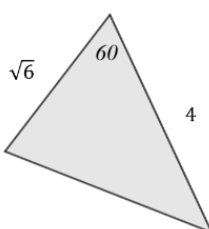
(7) Show that $(\cos 45 + \sin 45)^2 - 2 \tan 45 = 0$

(8) Given that $\sin x = 0.4$, find the value of y .



(9) Show that $\frac{6}{\tan 60} = 2\sqrt{3}$

(10) A non-right triangle is shown below.

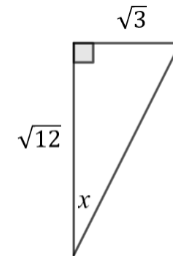


Show that the area of the triangle is $3\sqrt{2}$.

(11) Fully simplify $\frac{\sin 45 + \cos 45}{\tan 60}$

(12) Given that $k(\tan 30)^2 = 12$, find the value of k .

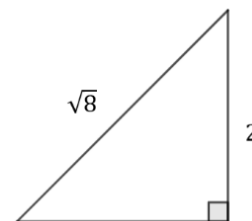
(13) Prove that $\tan x = \frac{1}{2}$ in the diagram below.



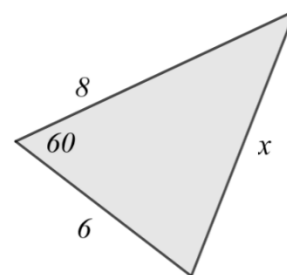
(14) Write $\tan 60 + \sin 60$ in the form $k\sqrt{3}$

(15) The first 4 terms of a linear (arithmetic) sequence are $\sqrt{3}$, $2 \tan 60$, $\sqrt{27}$ and x . Find the value of x in its simplest form.

(16) Using trigonometric ratios, find the size of the missing angles in the triangle below.



(17) Use the cosine rule to show that the value of x in the diagram below is $2\sqrt{13}$.



(18) Expand and simplify

$$(2 \cos 30 + 4 \sin 30)(3 \tan 30 - \tan 45)$$

Giving your answer in the form $A + \sqrt{B}$

(19)* Find the value of $10\cos 0 - 5 \sin(-30)$

(20)* $\tan p + \cos p + \sin q = 0$. Find a possible value of p and possible value of q .