



Timester Challenge

Trigonometry



Exact Trigonometric Values

Circle the value of $\sin 60^\circ$.

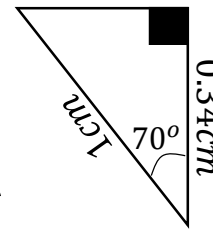
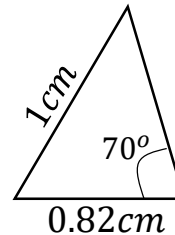
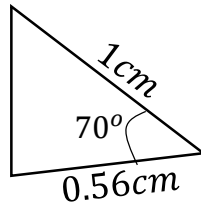
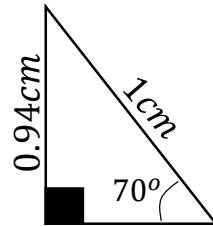
- | | |
|----------------------|----------------------|
| $\frac{1}{2}$ | $\frac{2}{\sqrt{3}}$ |
| $\frac{\sqrt{3}}{2}$ | $\frac{1}{\sqrt{3}}$ |

Bronze ★

Here are sketches of four triangles.

The longest side is exactly 1cm.

Another length is given to 2 decimal places.

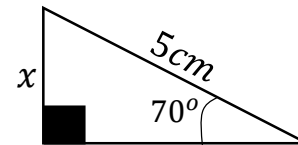


a) Circle the value of $\sin 70^\circ$. Correct to 2 decimal places.

- 0.94 0.56 0.82 0.34

b) Work out the value of x .

Give your answer to 1 decimal place.



Silver ★

Which of these values cannot be sine of an angle?

Circle your answer.

- | | | |
|-----|------|-----|
| -1 | -0.5 | 0 |
| 0.5 | 1 | 1.5 |

Gold ★

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

Bronze ★

Write down the exact value of $\tan 30^\circ$

Bronze ★

Show that $10 \sin 60^\circ - 3 \tan 60^\circ$ can be written in the form $a\sqrt{b}$ where a and b are integers.

Gold ★



Timester Challenge

Trigonometry - Exact Trigonometric Values



Answers

<p>Circle the value of $\sin 60^\circ$.</p> <p>$\frac{1}{2}$ $\frac{2}{\sqrt{3}}$</p> <p>$\frac{\sqrt{3}}{2}$ $\frac{1}{\sqrt{3}}$</p> <p>Bronze ★</p>	<p>Here are sketches of four triangles. The longest side is exactly 1cm. Another length is given to 2 decimal places.</p>	<p>Which of these values cannot be sine of an angle? Circle your answer.</p> <p>-1 -0.5 0</p> <p>0.5 1 1.5</p> <p>Gold ★</p>
<p>Write down the exact value of $\cos 30^\circ$</p> <p>$\frac{\sqrt{3}}{2}$ Bronze ★</p>	<p>a) Circle the value of $\sin 70^\circ$. Correct to 2 decimal places.</p> <p>0.94 0.56 0.82 0.34</p> <p>b) Work out the value of x. Give your answer to 1 decimal place.</p> <p>$\sin 70^\circ = \frac{x}{5}$ $x = 5 \sin 70^\circ$ $x = 5 \times 0.94$ $x = 4.7 \text{ cm}$</p> <p>Silver ★</p>	<p>Show that $10 \sin 60^\circ - 3 \tan 60^\circ$ can be written in the form $a\sqrt{b}$ where a and b are integers.</p> <p>$\sin 60^\circ = \frac{\sqrt{3}}{2}$ $\tan 60^\circ = \frac{\sqrt{3}}{1} = \sqrt{3}$</p> <p>$10 \times \frac{\sqrt{3}}{2} - 3 \times \sqrt{3}$ $= \frac{10\sqrt{3}}{2} - 3\sqrt{3}$ $= 5\sqrt{3} - 3\sqrt{3} = 2\sqrt{3}$</p> <p>Gold ★</p>