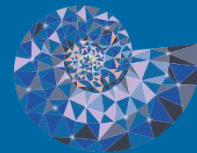


Equations and identities



Gold

a Show that $\tan^2 x - 3 = 0$ can be rewritten as $\cos^2 x = \frac{1}{4}$.

b Hence solve $\tan^2 x - 3 = 0$ for $-180^\circ \leq x \leq 180^\circ$.

Silver

Solve the equation:

$$\cos(x + 45^\circ) = 0.4$$

in the interval $0 \leq x \leq 360^\circ$, giving any answers to 2 decimal places.

Bronze

Without using a calculator, work out the values of:

a $\cos 135^\circ$

b $\sin(-60^\circ)$

c $\tan(-30^\circ)$