



Leith Academy National 5 Home Learning



TRIGONOMETRIC FUNCTIONS

CALCULATOR

1) Sketch the following graphs on 4 different grids for $0 \leq x \leq 360$.

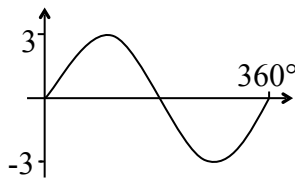
a) $y = 3 \sin x^\circ$ b) $y = \sin(2x)^\circ$ c) $y = \cos x + 3$ d) $y = 2 \cos x^\circ - 1$

2) Solve algebraically the following equations for $0 \leq x \leq 360$.

a) $3 \sin x^\circ = 2$ b) $\tan x^\circ + 1 = 4$ c) $4 \cos x^\circ = 3$ d) $5 \sin x^\circ + 3 = 2$

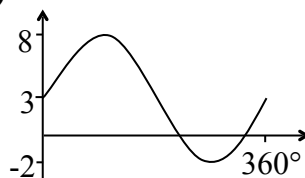
3) Work out the missing values a and b for each of these graphs.

a)



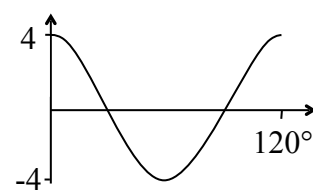
$y = a \sin x^\circ$

b)



$y = a \sin x^\circ + b$

c)



$y = a \cos(bx)^\circ$

4) Simplify the following.

a) $\tan x^\circ \cos x^\circ$

b) $\frac{1 - \cos^2 x}{\cos^2 x^\circ}$