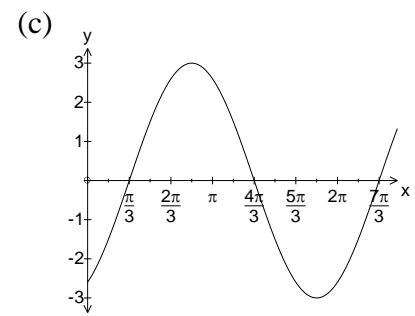
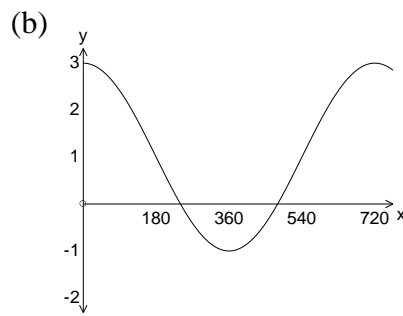
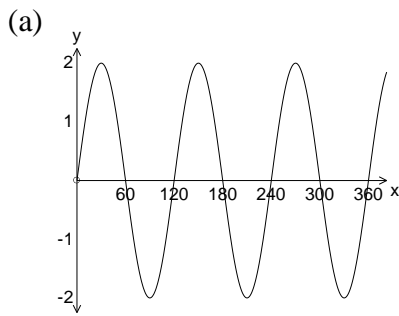


Trigonometry 1

1. Write down an trigonometric equation in terms of x and y for each graph below :



2. Sketch and annotate the graph for each of the following functions for $0 \leq x \leq 360$.

(a) $y = 4\cos 2x^\circ - 5$

(b) $y = 2\sin(x - 45)^\circ + 1$

3. Find, in its simplest form, the **exact** value of:

(a) $\sin(225^\circ)$

(b) $2\tan\left(\frac{\pi}{3}\right)\cos\left(\frac{\pi}{6}\right)$

(c) $2 - 3\cos^2 315$

4. Solve each of the following equations for $0 \leq x \leq 360$:

(a) $\sqrt{3} \tan x^\circ + 2 = 1$

(b) $2\sin 2x^\circ - 1 = 0$

(c) $2\cos^2 x^\circ + 3 = 4$

5. Solve each of the following equations for $0 \leq x \leq 2\pi$

(a) $\sqrt{2} \sin x + 3 = 4$

(b) $2\cos 2x = \sqrt{3}$

(c) $3\tan^2 x = 1$

6. Solve the following equations:

(a) $12\cos^2 x + \cos x - 6 = 0$ for $0 \leq x \leq 360$

(b) $6\cos\left(2x - \frac{\pi}{4}\right) + 4 = 7$ for $0 \leq x \leq \pi$

7. The diagram shows the graph of the function $y = a\sin bx + c$.

(a) Write down the values of a , b and c

(b) Find algebraically the values of x for which $y = 2.5$

