Transforming Trig Graphs

We can use our knowledge of transforming graphs to transform trig graphs.

Recap

Examples

1. Sketch $y = 4\sin x,\ 0 \leq x \leq 360°$

2. Sketch $y = \cos(x + 45°),\ 0 \leq x \leq 360°$

3. Sketch $y = -\tan x,\ 0 \leq x \leq 360°$

4. Sketch $y = \sin\left(\frac{x}{2}\right)$, $0 \leq x \leq 360°$

Extension

1.

[MAT 2013 1B] The graph of $y = \sin x$ is reflected first in the line $x = \pi$ and then in the line $y = 2$. The resulting graph has equation:

A) $y = \cos x$

B) $y = 2 + \sin x$

C) $y = 4 + \sin x$

D) $y = 2 - \cos x$

2.

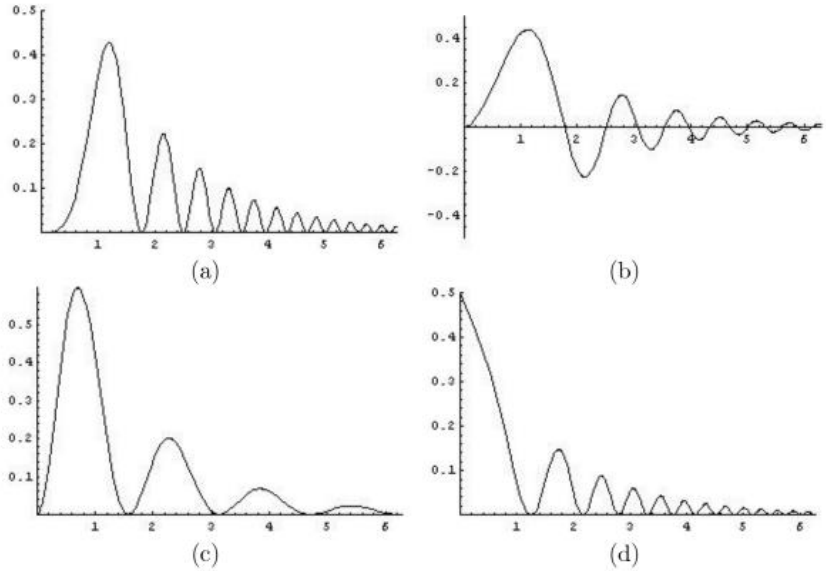
[MAT 2011 1D] What fraction of the interval
$0 \leq x \leq 360°$ is one (or both) of the inequalities:

$\sin x \geq \frac{1}{2}$, $\sin 2x \geq \frac{1}{2}$ true?

3.

MAT 2007 1G] On which of the axes is a sketch of the graph

$$y = 2^{-x}\sin^2(x^2)$$



Ex 9F/G Pg 194 – 197.