

Sketch trigonometric graphs

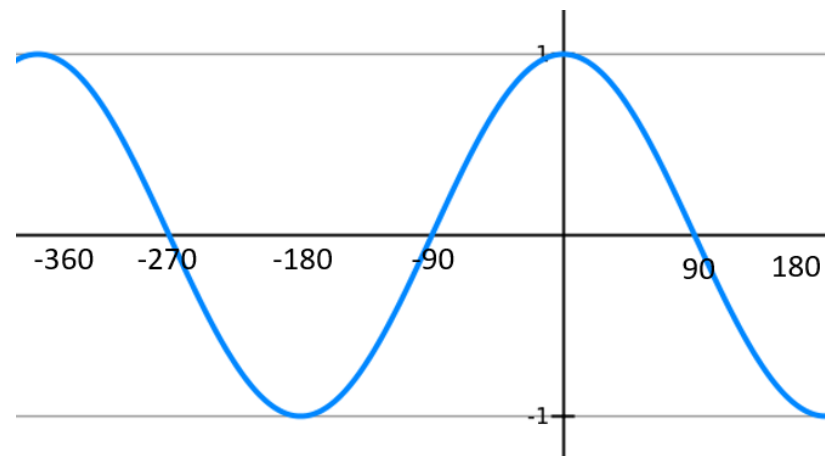
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Worked example

Sketch the graph of $y = \sin x$, $-180 \leq x \leq 360^\circ$

Your turn

Sketch the graph of $y = \cos x$, $-360 \leq x \leq 180^\circ$

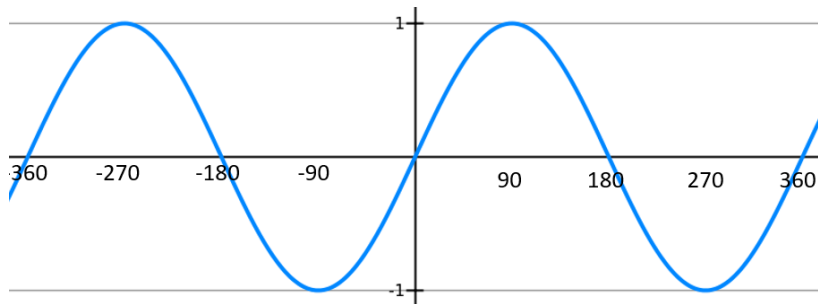


Worked example

A sketch of $y = \sin x$, $-360^\circ \leq x \leq 360^\circ$ is shown.

Given that $\sin 30 = \frac{1}{2}$, find:

- a) $\sin(150^\circ)$
- b) $\sin(-300^\circ)$
- c) $\sin(330^\circ)$
- d) $\sin(-210^\circ)$

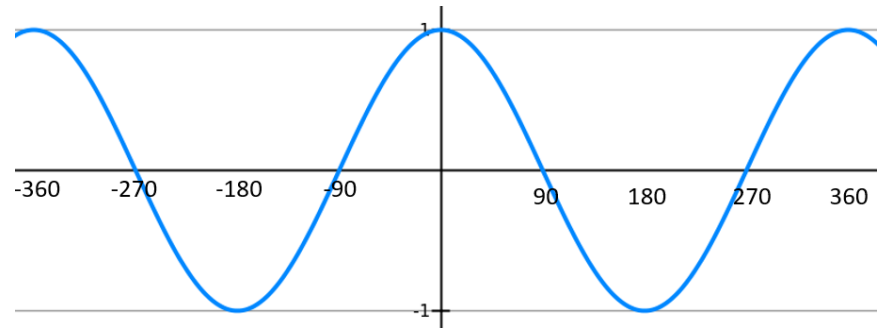


Your turn

A sketch of $y = \cos x$, $-360^\circ \leq x \leq 360^\circ$ is shown.

Given that $\cos 30 = \frac{\sqrt{3}}{2}$, find:

- a) $\cos(-30^\circ)$
- b) $\cos(330^\circ)$
- c) $\cos(150^\circ)$
- d) $\cos(-210^\circ)$



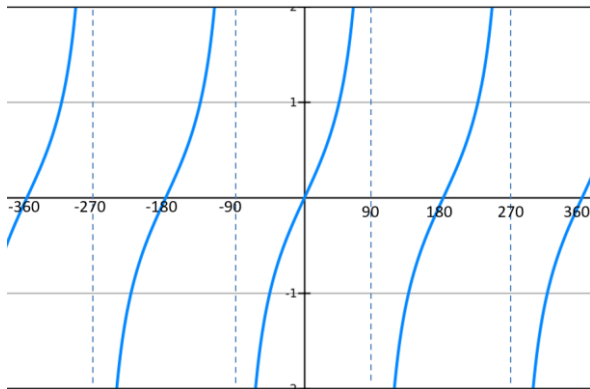
- a) $\frac{\sqrt{3}}{2}$
- b) $\frac{\sqrt{3}}{2}$
- c) $-\frac{\sqrt{3}}{2}$
- d) $-\frac{\sqrt{3}}{2}$

Worked example

A sketch of $y = \tan x$, $-360^\circ \leq x \leq 360^\circ$ is shown.

Given that $\tan 60 = \sqrt{3}$, find:

- a) $\tan(-60^\circ)$
- b) $\tan(-300^\circ)$
- c) $\tan(120^\circ)$

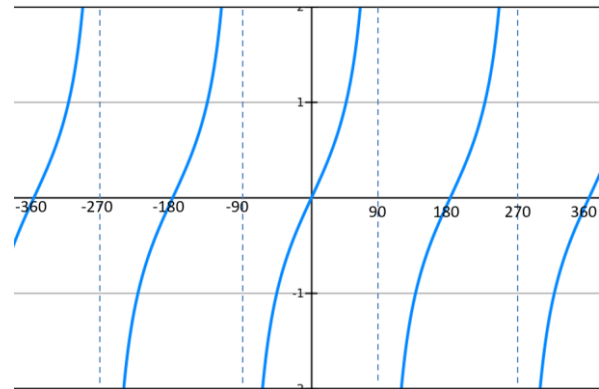


Your turn

A sketch of $y = \tan x$, $-360^\circ \leq x \leq 360^\circ$ is shown.

Given that $\tan 30 = \frac{\sqrt{3}}{3}$, find:

- a) $\tan(-30^\circ)$
- b) $\tan(-330^\circ)$
- c) $\tan(150^\circ)$



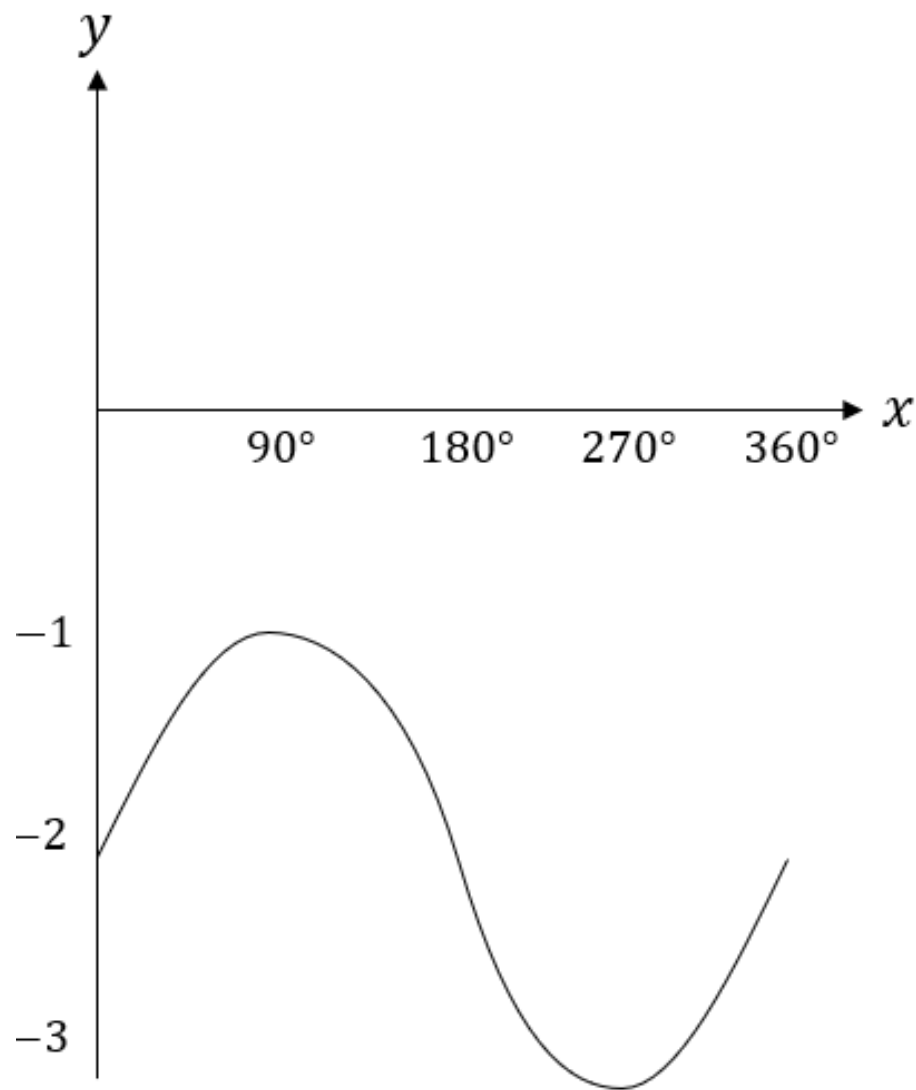
- a) $-\frac{\sqrt{3}}{3}$
- b) $\frac{\sqrt{3}}{3}$
- c) $-\frac{\sqrt{3}}{3}$

Worked example

Sketch $y = \cos x + 1$, $0 \leq x \leq 360^\circ$

Your turn

Sketch $y = \sin x - 2$, $0 \leq x \leq 360^\circ$

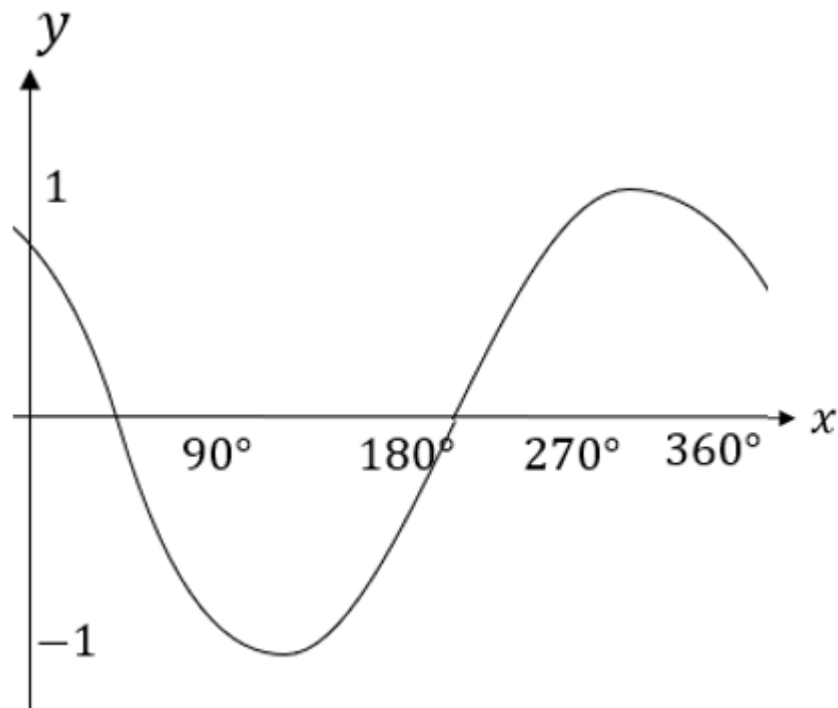


Worked example

Sketch $y = \sin(x - 45^\circ)$, $0 \leq x \leq 360^\circ$

Your turn

Sketch $y = \cos(x + 45^\circ)$, $0 \leq x \leq 360^\circ$

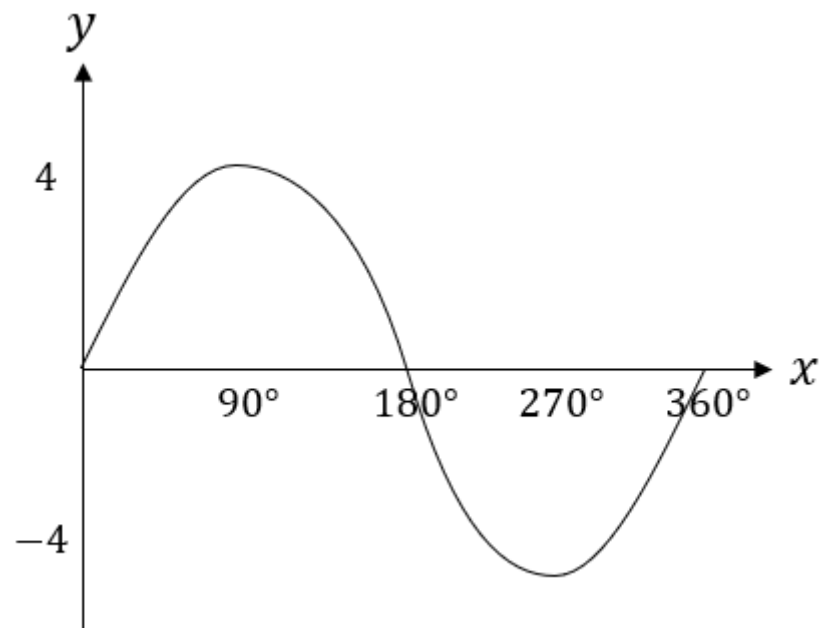


Worked example

Sketch $y = 3 \cos x, 0 \leq x \leq 360^\circ$

Your turn

Sketch $y = 4 \sin x, 0 \leq x \leq 360^\circ$



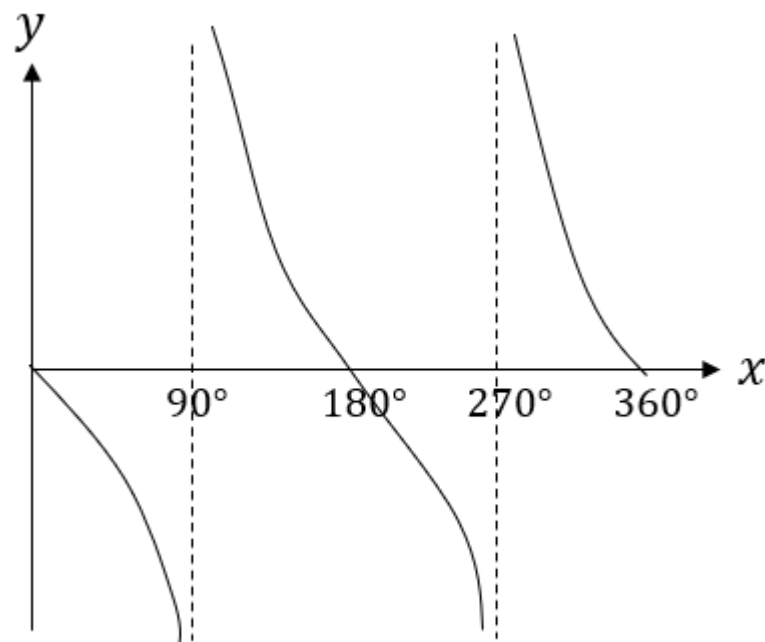
Worked example

Sketch $y = -\sin x$, $0 \leq x \leq 360^\circ$

Sketch $y = \cos(-x)$, $0 \leq x \leq 360^\circ$

Your turn

Sketch $y = -\tan x$, $0 \leq x \leq 360^\circ$



Worked example

Sketch $y = \cos(2x)$, $0 \leq x \leq 360^\circ$

Your turn

Sketch $y = \sin\left(\frac{x}{2}\right)$, $0 \leq x \leq 360^\circ$

