

Name:

Level 2 Further Maths



Trigonometric Graphs Corbettmaths

Ensure you have: Pencil or pen

Guidance

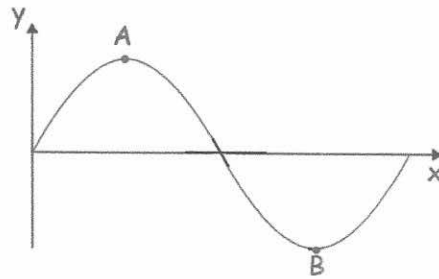
1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Revision for this topic

www.corbettmaths.com/more/further-maths/



1. Here is part of the curve $y = \sin x$



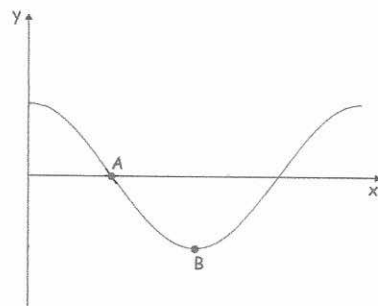
- (a) Write down the coordinates of the point A

(90, 1)
(1)

- (b) Write down the coordinates of the point B

(270, -1)
(1)

2. Here is part of the curve $y = \cos x$



- (a) Write down the coordinates of the point A

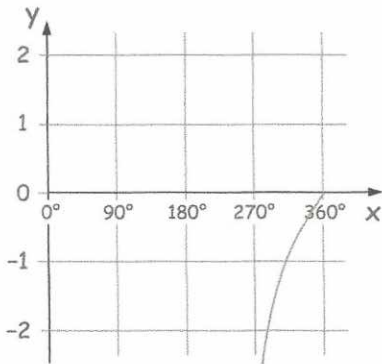
(90, 0)
(1)

- (b) Write down the coordinates of the point B

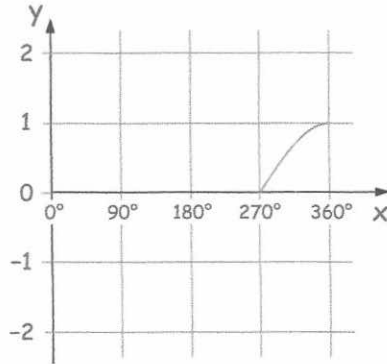
(180, -1)
(1)

3. Here are three graphs for $270^\circ \leq x \leq 360^\circ$

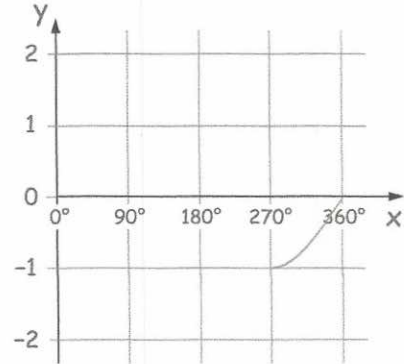
Graph 1



Graph 2



Graph 3



(a) Write down which graph is $y = \sin x$

Graph 3
.....
(1)

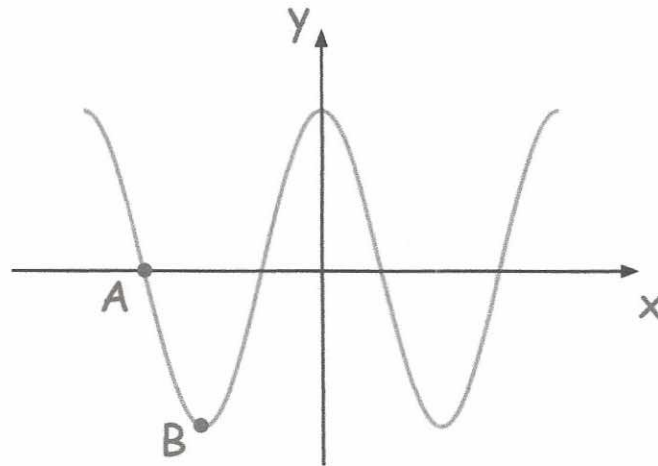
(b) Write down which graph is $y = \cos x$

Graph 2
.....
(1)

(c) Write down which graph is $y = \tan x$

Graph 1
.....
(1)

3. Here is a sketch of $y = \cos x$



(a) Write down the coordinates of the point A

$(-270, 0)$

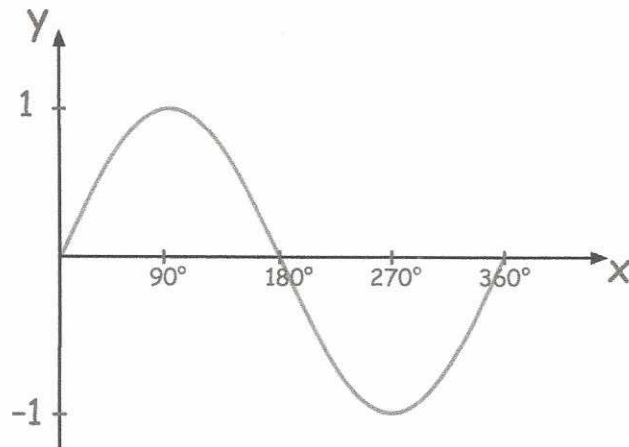
(1)

(b) Write down the coordinates of the point B

$(-180, -1)$

(1)

4. Here is the graph of $y = \sin x$ for $0^\circ \leq x \leq 360^\circ$



One solution of $\sin x = -0.5$ is $x = 210^\circ$

(a) Find another solution of $\sin x = -0.5$ for $0^\circ \leq x \leq 360^\circ$

330°

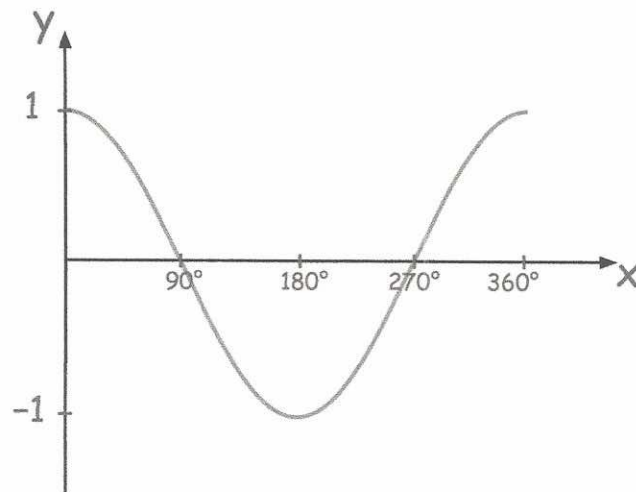
(1)

(b) Find the solutions of $\sin x = 0.5$ for $0^\circ \leq x \leq 360^\circ$

30° & 150°

(2)

5. Here is a sketch of $y = \cos x$



$$\cos 20^\circ = 0.9397$$

(a) Work out $\cos 160^\circ$

$$\frac{-0.9397}{(1)}$$

(b) Work out $\cos 380^\circ$

$$\frac{0.9397}{(1)}$$

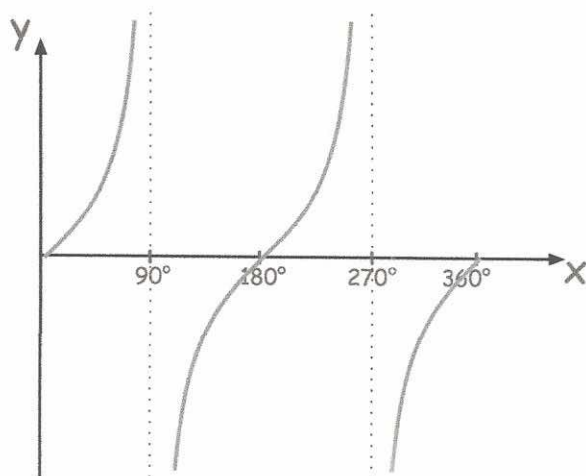
(c) Work out $\cos(-200^\circ)$

$$\frac{-0.9397}{(1)}$$

(d) Work out $\cos(-540^\circ)$

$$\frac{-1}{(1)}$$

6. Here is a sketch of $y = \tan x$ for $0^\circ \leq x \leq 360^\circ$



Given that $\tan 54^\circ = 1.376$

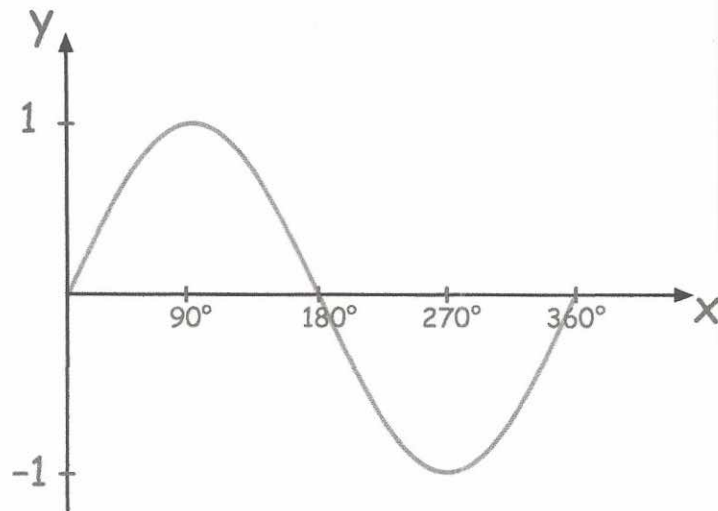
Solve $\tan x = -1.376$ for $0^\circ \leq x \leq 360^\circ$

$$x = 126^\circ$$

$$x = 306^\circ$$

$$\frac{126^\circ \text{ and } 306^\circ}{(2)}$$

7. Here is a sketch of $y = \sin x$ for $0^\circ \leq x \leq 360^\circ$



Given that $\sin 195^\circ = -0.2588$

Solve $\sin x = 0.2588$ for $0^\circ \leq x \leq 360^\circ$

$$\frac{15^\circ \text{ \& } 165^\circ}{(2)}$$