

Trig Graphs and Solutions (NON C

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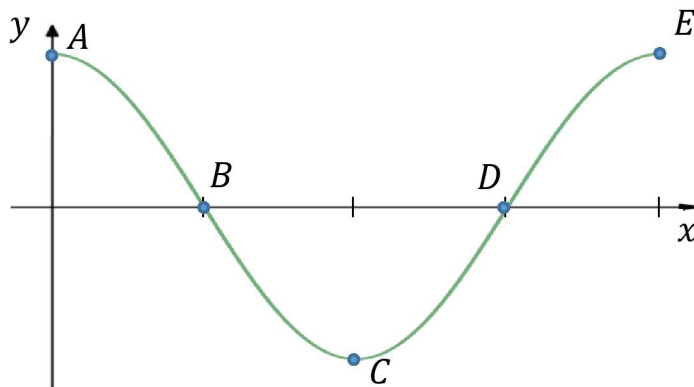
1) Trig Graphs and Solutions (NON CALC): Easier

1) Complete the table of exact trigonometric values. Some have been done for you

x	30°	45°	60°
$\sin x$	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$
$\cos x$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$
$\tan x$	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$

(3 marks)

2) Below is a graph of $y = \cos x$ for $0^\circ \leq x \leq 360^\circ$.

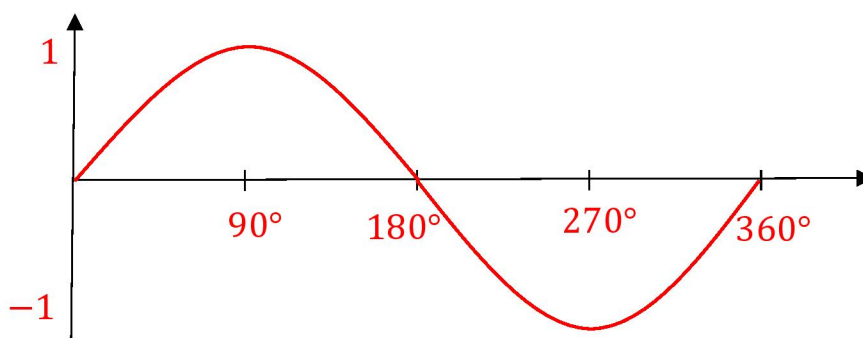


a) Complete the missing coordinates for the points below

$A(0, 1)$, $B(90, 0)$, $C(180, -1)$, $D(270, 0)$, $E(360, 1)$

(3 mark)

b) Sketch the graph for $y = \sin x$ for value $0^\circ \leq x \leq 360^\circ$.

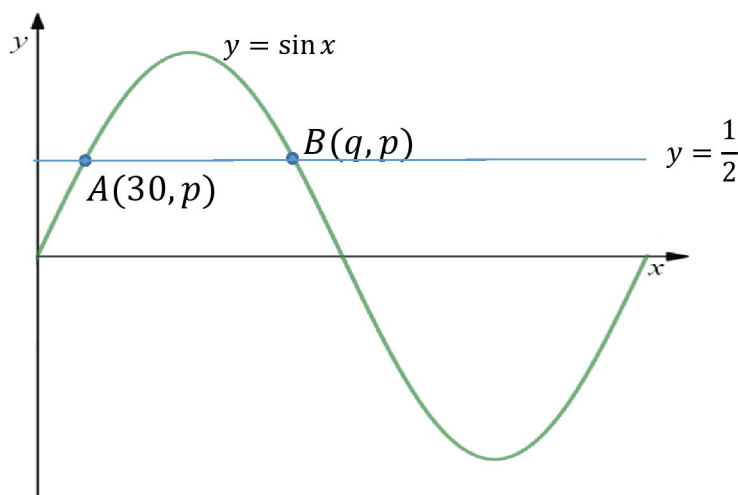


(3 marks)

1) Trig Graphs and Solutions (NON CALC): Medium

3) $y = \sin x$, for $0^\circ \leq x \leq 360^\circ$, is shown on the graph below.

The line $y = \frac{1}{2}$ is also shown on the graph.



a) Write down the value of p

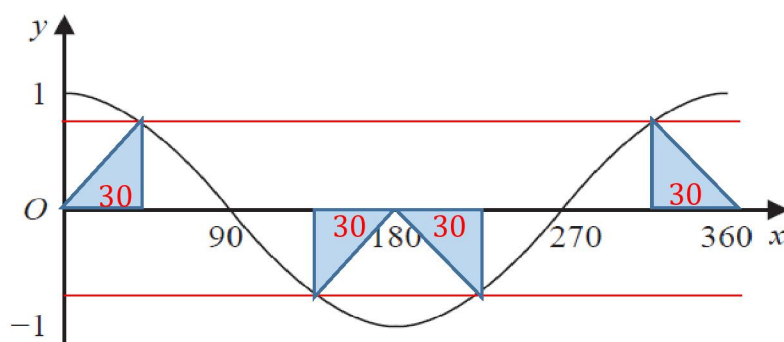
$$p = \dots\dots\dots \frac{1}{2} \dots\dots\dots$$

b) Work out the value of q $180 - 30 = 150$

$$q = \dots\dots\dots 150^\circ \dots\dots\dots$$

(2 marks)

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



The exact value of $\cos 30^\circ$ is $\frac{\sqrt{3}}{2}$.

a) Write down the exact value of $\cos 330^\circ$

$$\cos 330^\circ = \dots\dots\dots \frac{\sqrt{3}}{2} \dots\dots\dots$$

(1 mark)

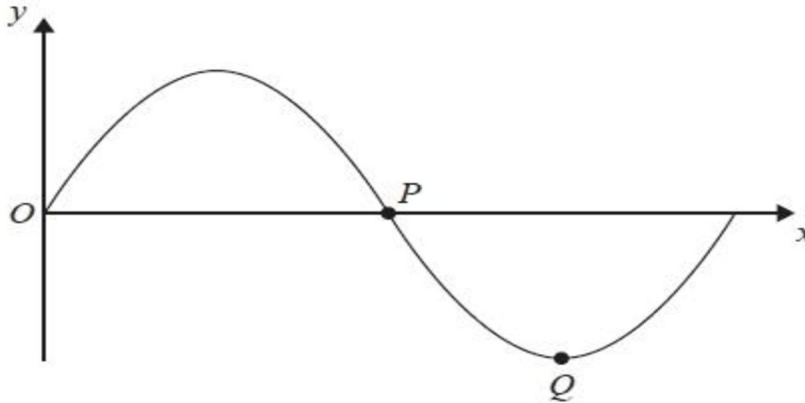
b) Find two solutions of the equation $\cos x^\circ = -\frac{\sqrt{3}}{2}$

$$x = \dots\dots\dots 150 \dots\dots\dots \text{ or } x = \dots\dots\dots 210 \dots\dots\dots$$

(2 marks)

1) Trig Graphs and Solutions (NON CALC): Harder

- 5) The graph below shows $f(x) = \sin x^\circ$ for values of x between 0 and 360.



- a) Write down the coordinates of points P and Q

$$P(\dots 180 \dots, \dots 0 \dots) \quad Q(\dots 270 \dots, \dots -1 \dots)$$

(2 marks)

- b) Given that $\sin 45^\circ = \frac{\sqrt{2}}{2}$, find the exact value of
i) $\sin 135^\circ$

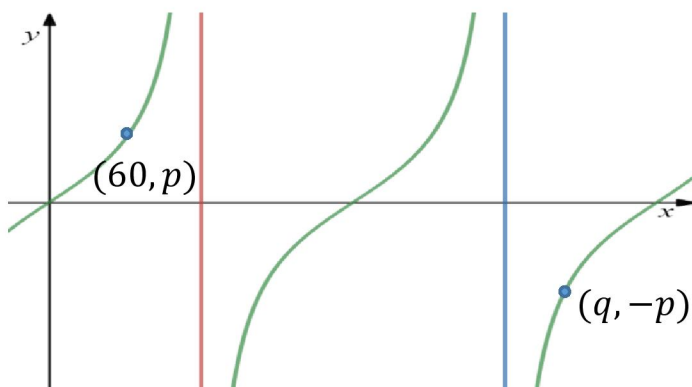
$$\sin 135^\circ = \dots \frac{\sqrt{2}}{2} \dots$$

- ii) $\sin 315^\circ$

$$\sin 315^\circ = \dots -\frac{\sqrt{2}}{2} \dots$$

(2 marks)

- 6) The graph below shows $y = \tan x$, for $0^\circ \leq x \leq 360^\circ$ and the coordinates of two points



Work out the values of p and q .

$$p = \dots \sqrt{3} \dots$$

$$q = \dots 300 \dots$$

(2 marks)