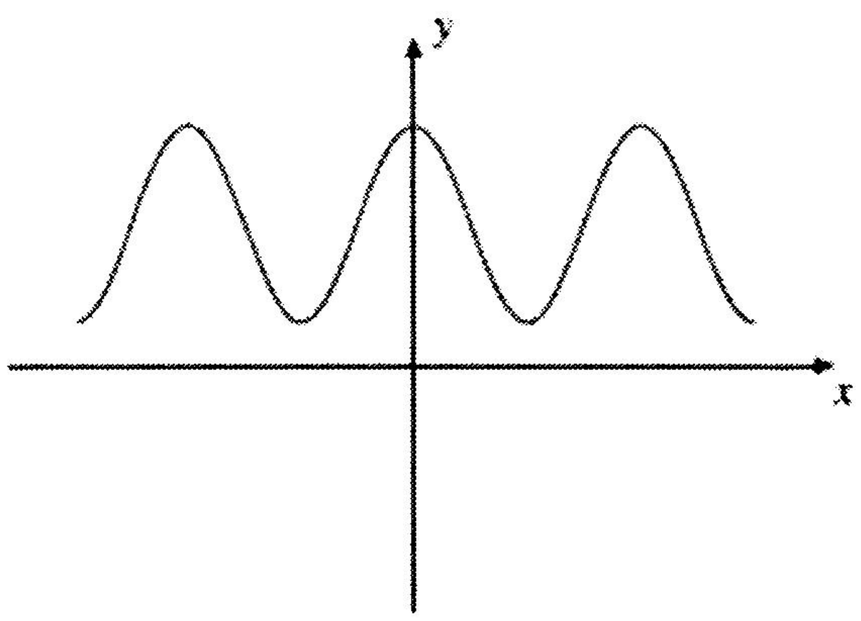
ANSWERS

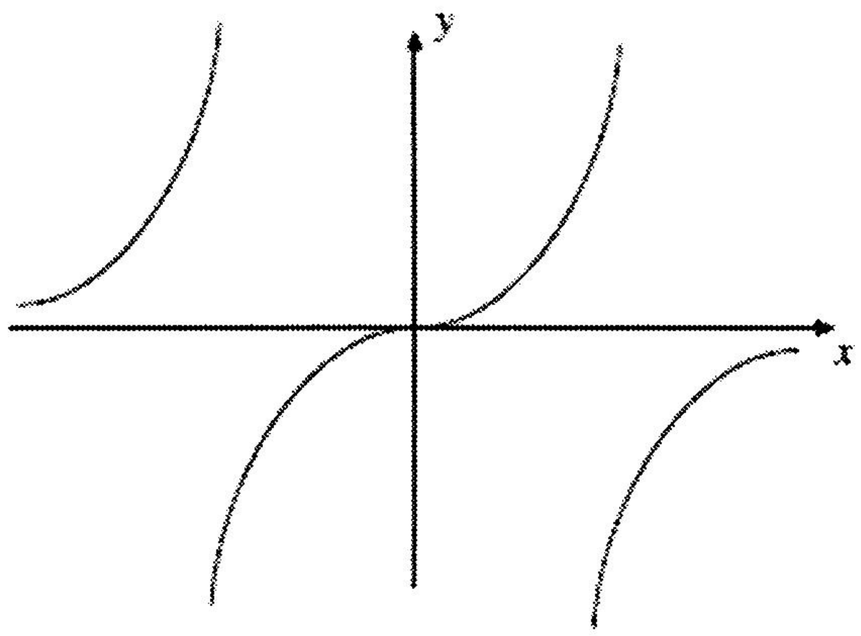
Trigonometric Graphs – Past Paper Questions

14. Match each of the following equations to the appropriate sketch by writing the equations in the spaces below.

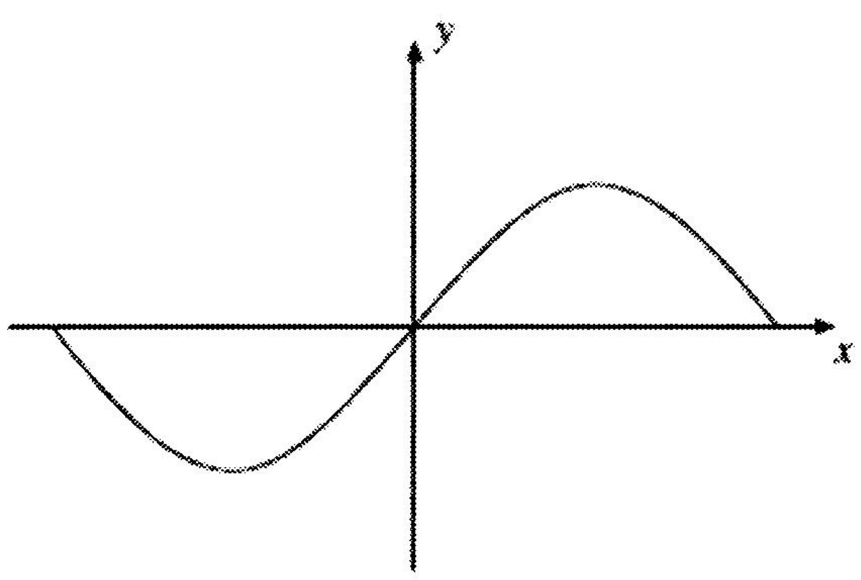
$y = \sin x$ $\quad$ $y = \tan x$ $\quad$ $y = 2 + \cos x$



Equation $2 + \cos x$



Equation $\tan x$

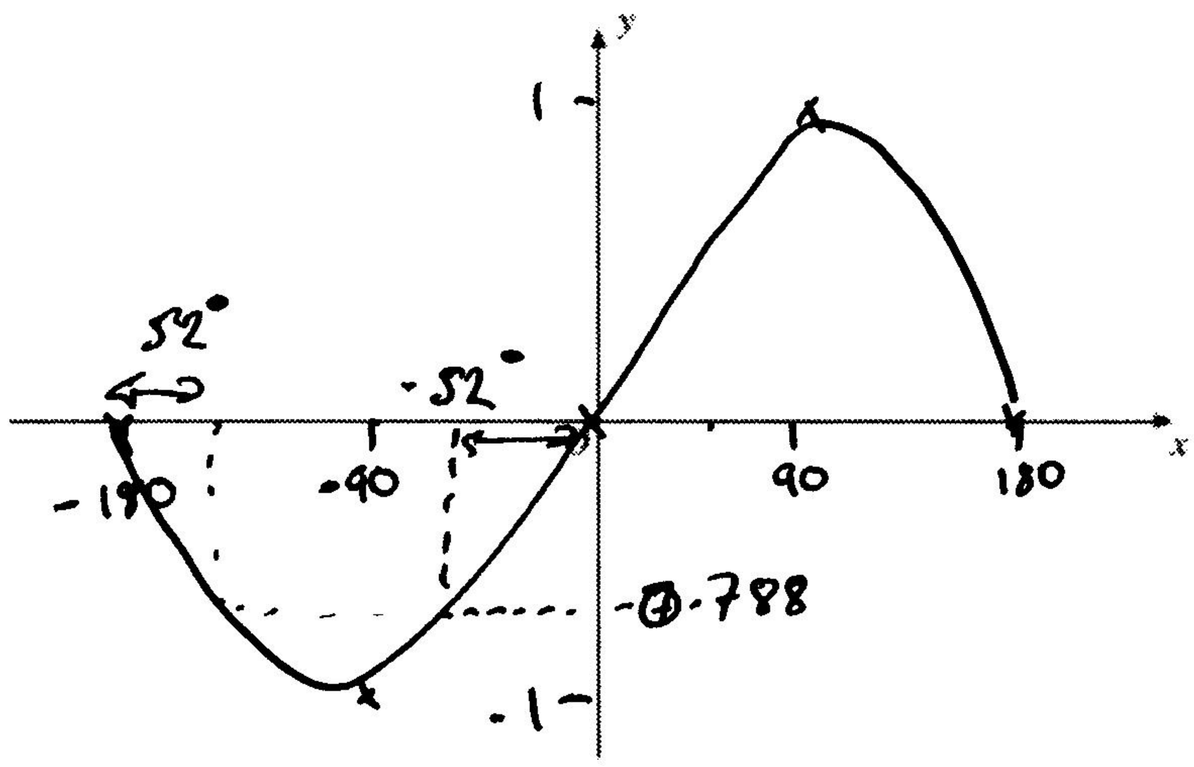


Equation $\sin x$

[2]

18. *(a)* Using the axes below, sketch the graph of $y = \sin x$ for values of x from $-180°$ to $180°$.

[2]



① for -1 and 1 on y axis

① for graph in right place.

(b) Find **all** solutions of the following equation in the range $-180°$ to $180°$.

$$\sin x = -0{\cdot}788$$

$\sin^{-1}(-0{\cdot}788) = -51{\cdot}99$ ①

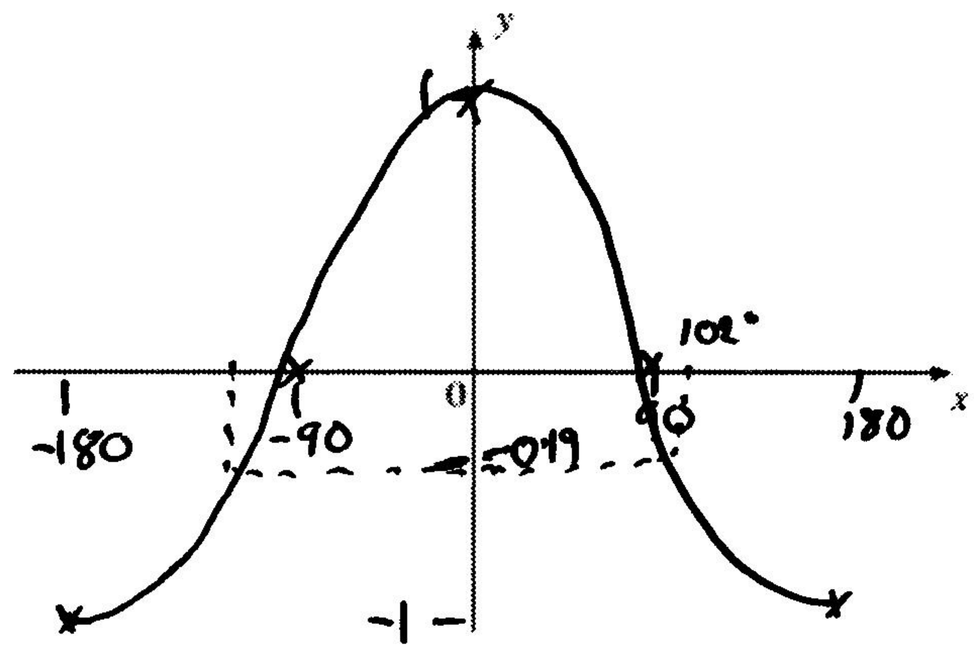
$= -52°$

and $180 - 52 = -128°$ ①

[2]

16. *(a)* Using the axes below, sketch the graph of $y = \cos x$ for values of x from $-180°$ to $180°$.

[2]



① for between -1 and 1

① for graph in right place.

(b) Find **all** solutions of the following equation in the range $-180°$ to $180°$.

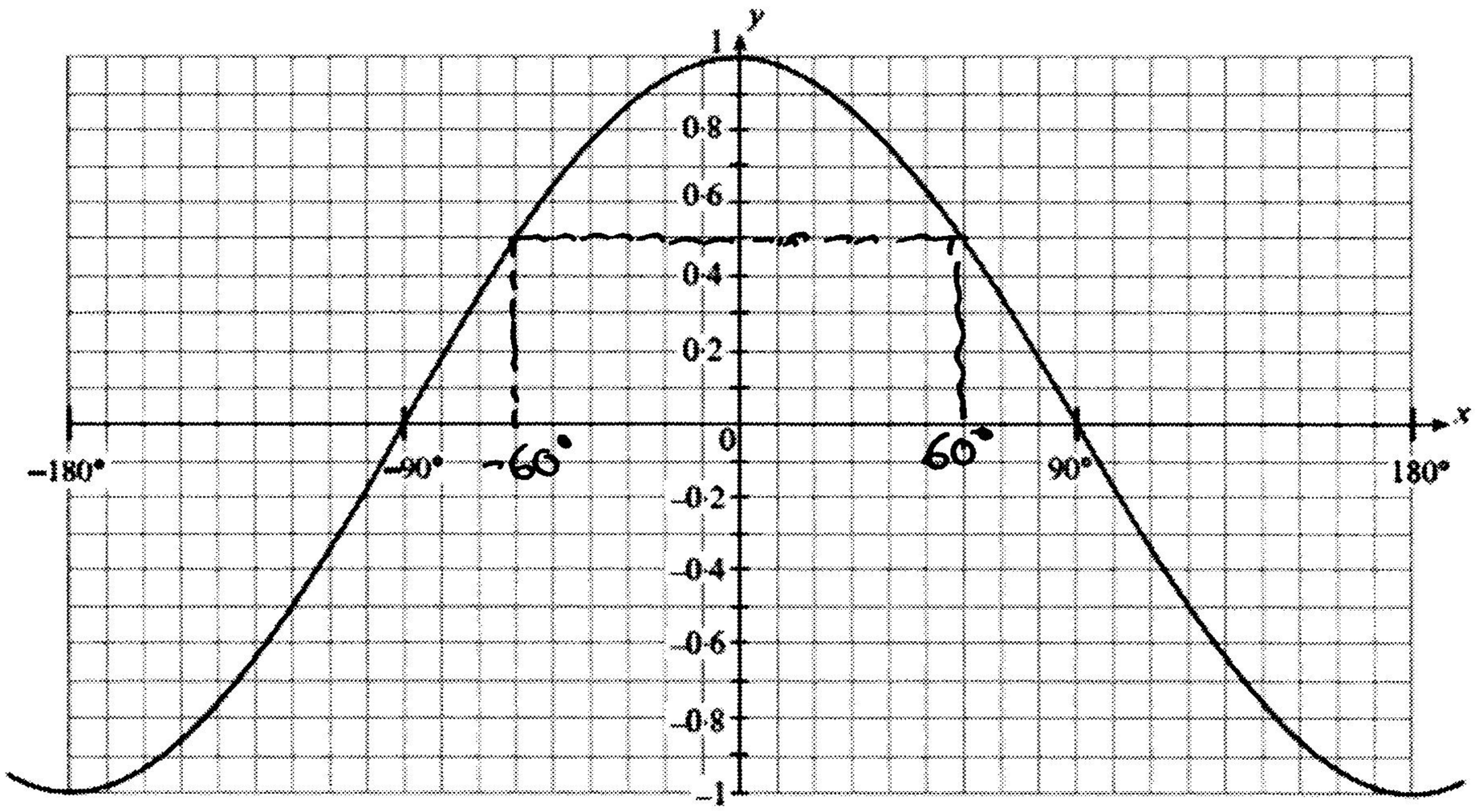
$$\cos x = -0{\cdot}19$$

$\cos^{-1}(-0{\cdot}19) = x$ $x = 101°$ ①

and $x = -101°$ ①

[2]

(b) **The diagram shows a sketch of $y = \cos x$.**



Find the values of x in the range $-180° \leqslant x \leqslant 180°$ which satisfy the equation $\cos x = 0{\cdot}5$.

$x = 60°$ (1)

or

$x = -60°$ (1)

[2]