Trigonometric Graphs

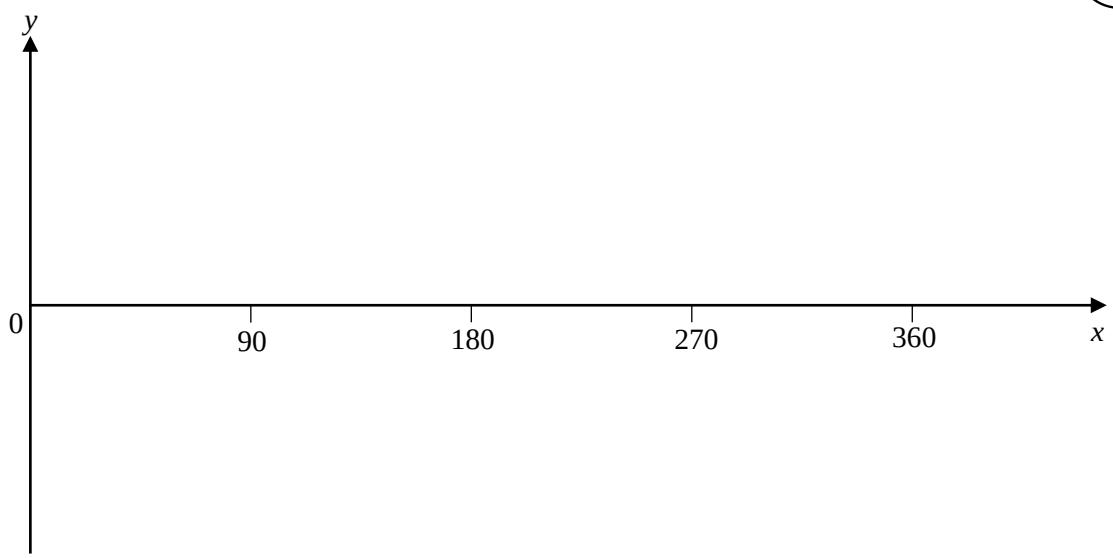
SCAN ME

REVISE THIS TOPIC

CHECK YOUR ANSWERS

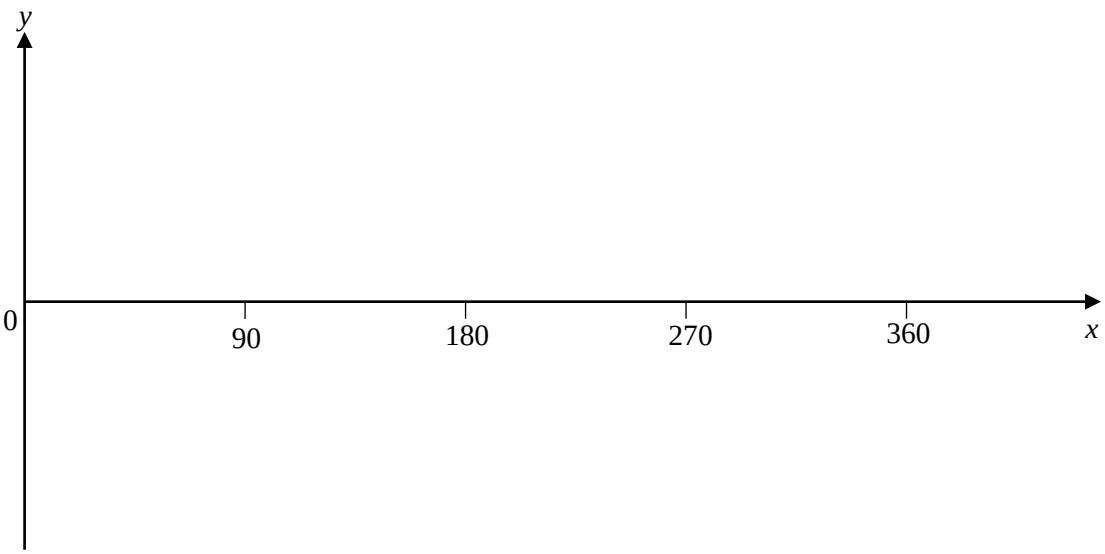
SCAN ME

1 Sketch the graph of $y = \sin x°$ for $0 \leq x \leq 360$



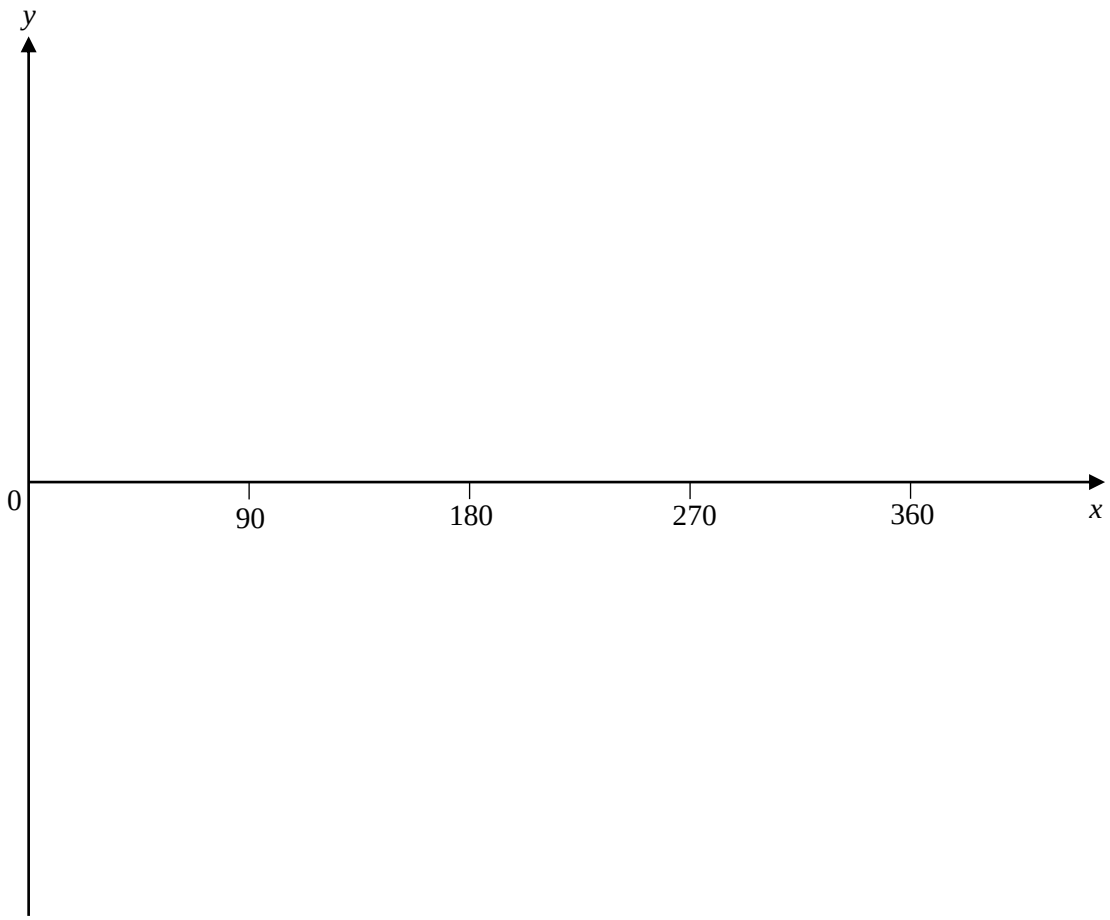
(Total for Question 1 is 2 marks)

2 Sketch the graph of $y = \cos x°$ for $0 \leq x \leq 360$



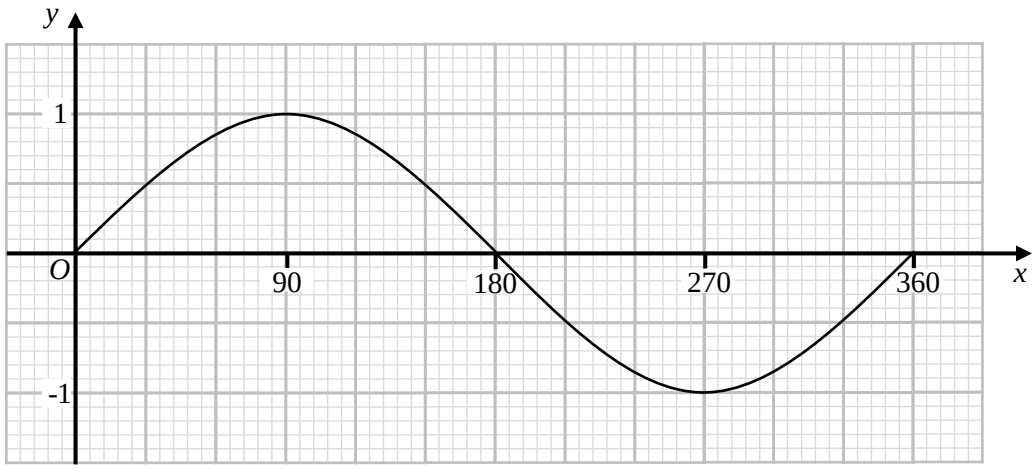
(Total for Question 2 is 2 marks)

3 Sketch the graph of $y = \tan x°$ for $0 \leq x \leq 360$



(Total for Question 3 is 2 marks)

4 Here is a graph of $y = \sin x°$ for $0 \leq x \leq 360$



(a) Use the graph to find estimates for the solutions of

$$\sin x° = 0.8 \quad \text{for} \quad 0 \leq x \leq 360$$

.....

(2)

(b) Use the graph to find estimates for the solutions of

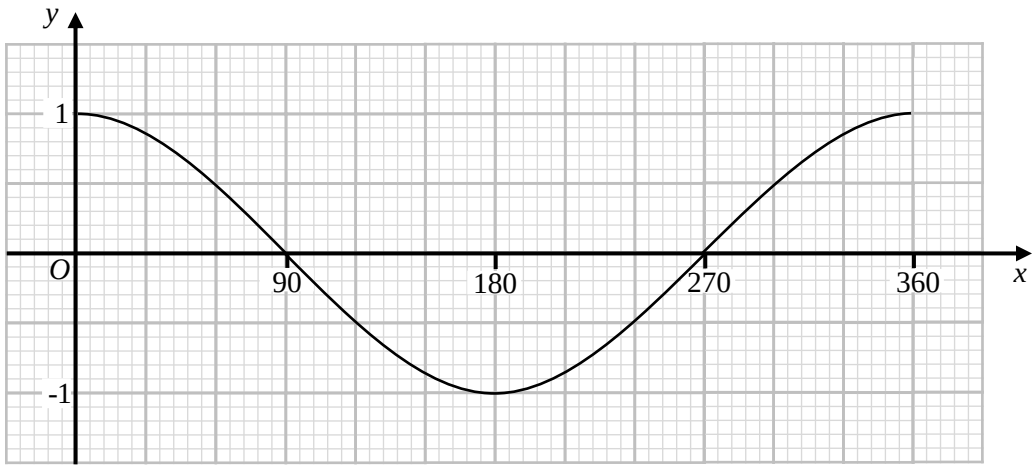
$$\sin x° = -0.4 \quad \text{for} \quad 0 \leq x \leq 360$$

.....

(2)

(Total for Question 4 is 4 marks)

5 Here is a graph of $y = \cos x°$ for $0 \leq x \leq 360$



(a) Use the graph to find estimates for the solutions of

$$\cos x° = 0.2 \quad \text{for} \quad 0 \leq x \leq 360$$

.....

(2)

(b) Use the graph to find estimates for the solutions of

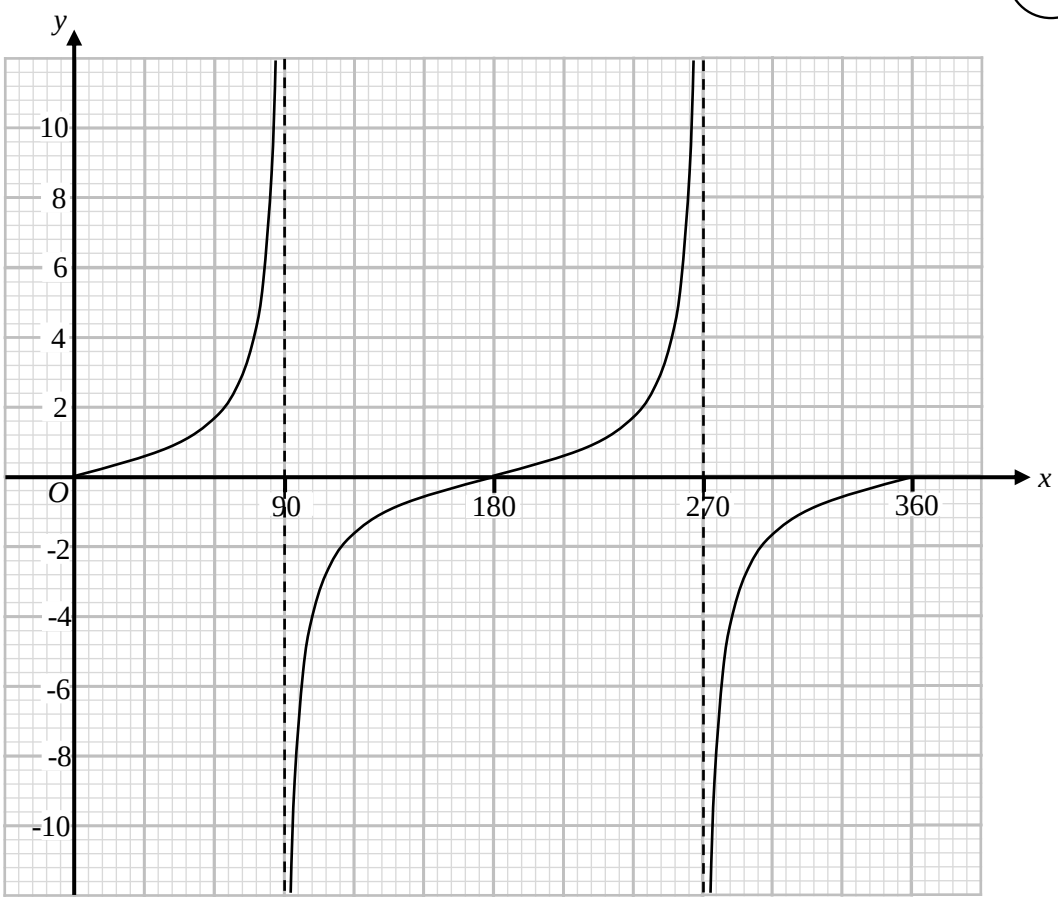
$$\cos x° = -0.9 \quad \text{for} \quad 0 \leq x \leq 360$$

.....

(2)

(Total for Question 5 is 4 marks)

6 Here is a graph of $y = \tan x°$ for $0 \leq x \leq 360$



(a) Use the graph to find estimates for the solutions of

$$\tan x° = 3 \quad \text{for} \quad 0 \leq x \leq 360$$

.....

(2)

(b) Use the graph to find estimates for the solutions of

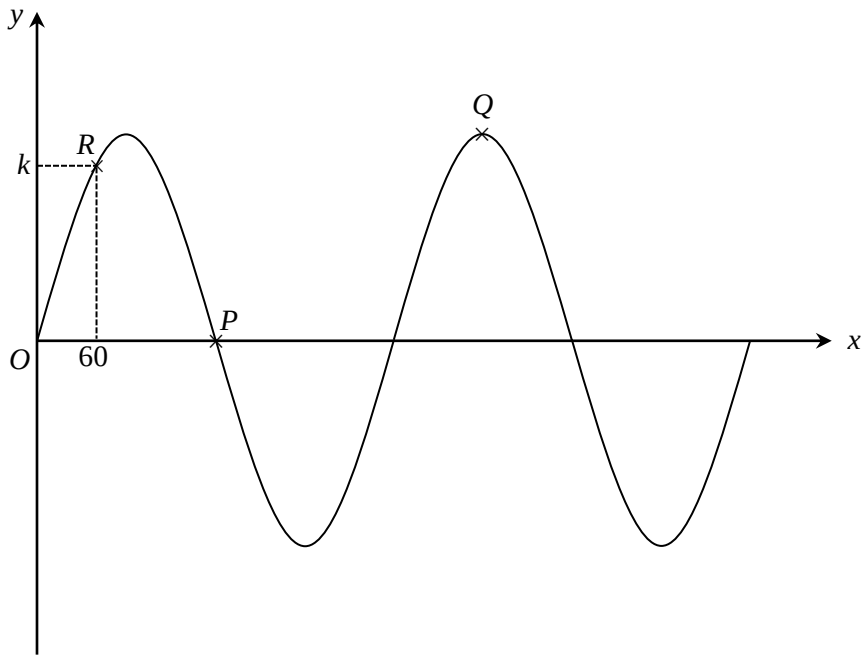
$$\tan x° = -0.8 \quad \text{for} \quad 0 \leq x \leq 360$$

.....

(2)

(Total for Question 6 is 4 marks)

7



The diagram shows a sketch of part of the curve with equation $y = \sin x°$
Q is a maximum point on the curve.
The coordinates of point R are $(60, k)$

(a) Write down the coordinates of point P.

(b) Write down the coordinates of point Q.

(..... , ...)

(1)

(c) Write down the exact value of k.

(..... , ...)

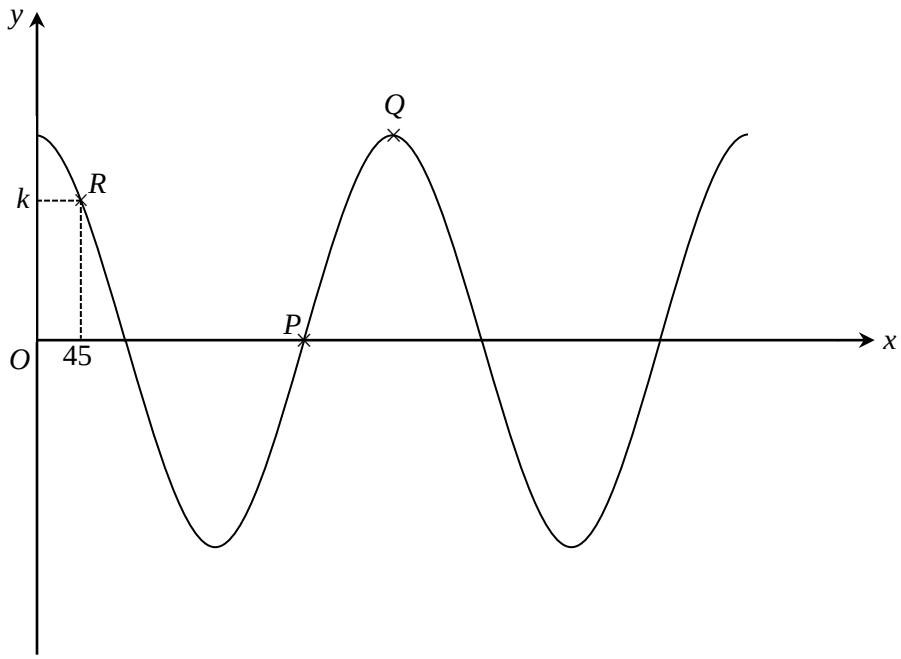
(1)

$k =$ .....

(1)

(Total for Question 7 is 3 marks)

8



The diagram shows a sketch of part of the curve with equation $y = \cos x°$
Q is a maximum point on the curve.
The coordinates of point R are $(45, k)$

(a) Write down the coordinates of point P.

(b) Write down the coordinates of point Q.

(..... , ...)

(1)

(c) Write down the exact value of k.

(..... , ...)

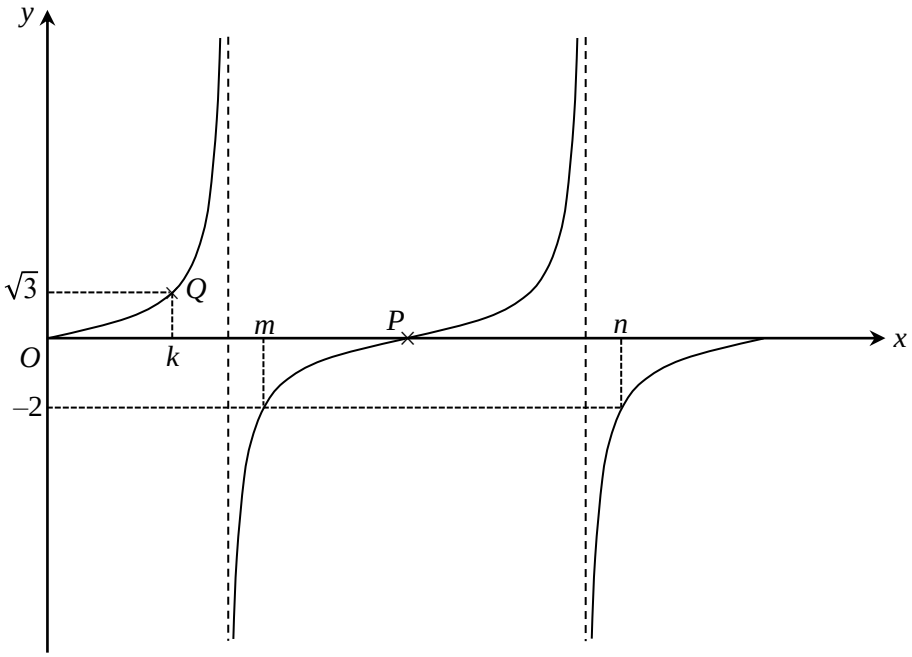
(1)

$k =$ .....

(1)

(Total for Question 8 is 3 marks)

9



The diagram shows a sketch of part of the curve with equation $y = \tan x°$
The coordinates of point Q are $(k, \sqrt{3})$
$0 < m < 360$, $0 < n < 360$ and $m < n$

(a) Write down the coordinates of point P.

(..... , ...)

(1)

(b) Write down the value of k.

$k =$ .....

(1)

$\tan m° = \tan n° = -2$

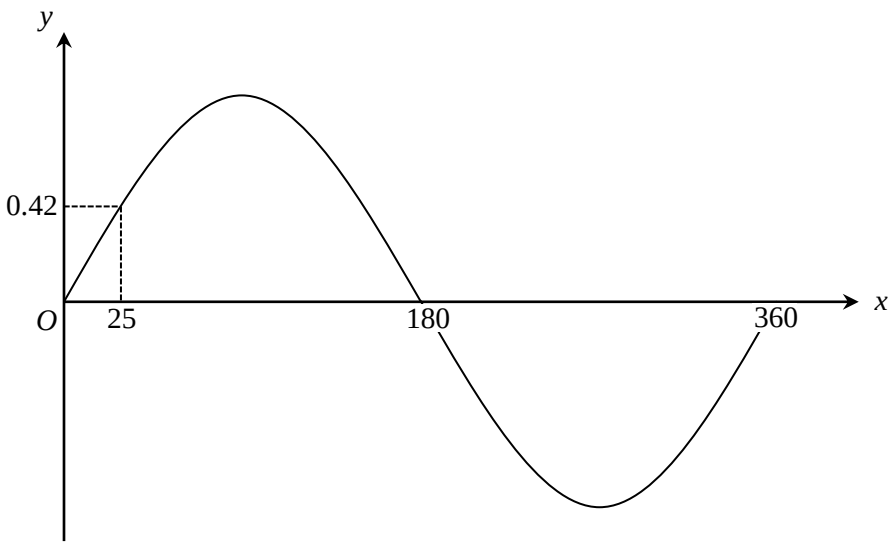
(c) Express n in terms of m.

.....

(1)

(Total for Question 9 is 3 marks)

10



The diagram shows a sketch of part of the curve with equation $y = \sin x°$

$\sin(25°) = 0.42$ (to 2 decimal places)

$\sin(p°) = \sin(q°) = \sin(25°)$ where $90° < p < 180°$ and $360° < q < 450°$

(a) Write down the value of p

$p =$ .....

(1)

(b) Write down the value of q

$q =$ .....

(1)

$\sin(a°) = \sin(b°) = –0.42$ where $a < b$ and $180° < a < 360°$ and $180° < b < 360°$

(c) Write down the values of a and b.

$a =$ .....

(1)

$b =$ .....

(1)

(Total for Question 10 is 4 marks)