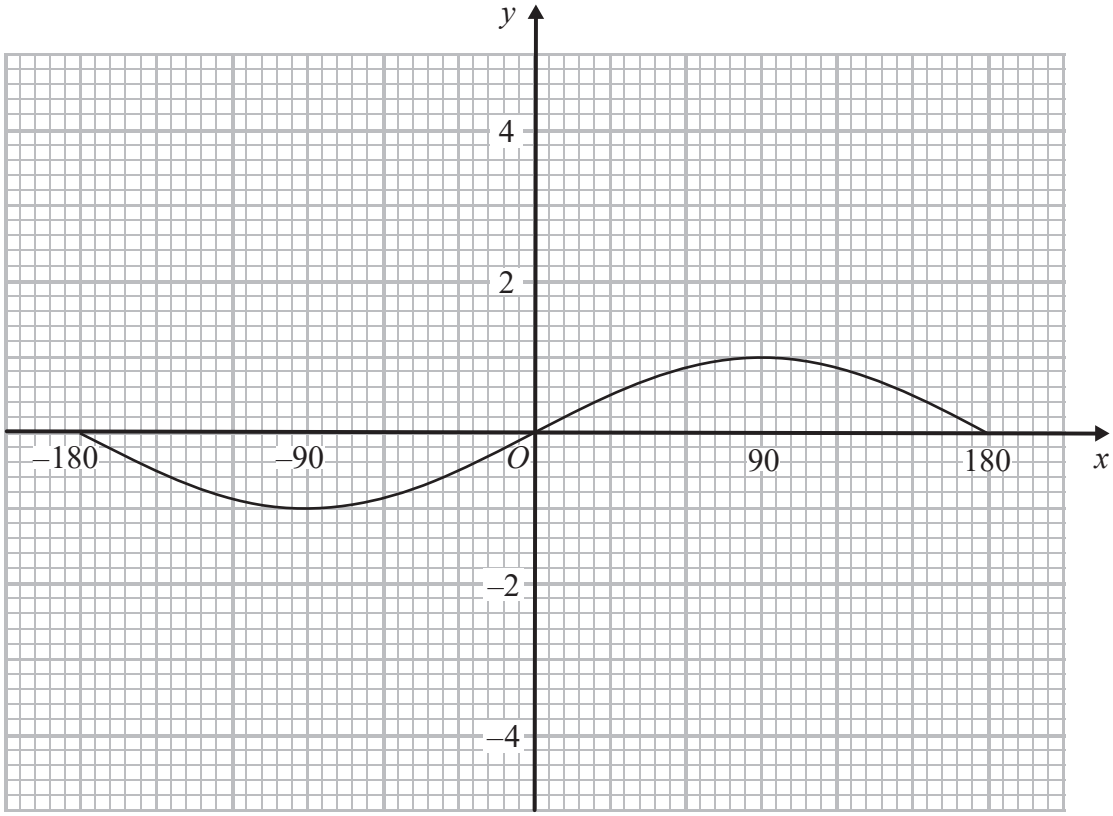
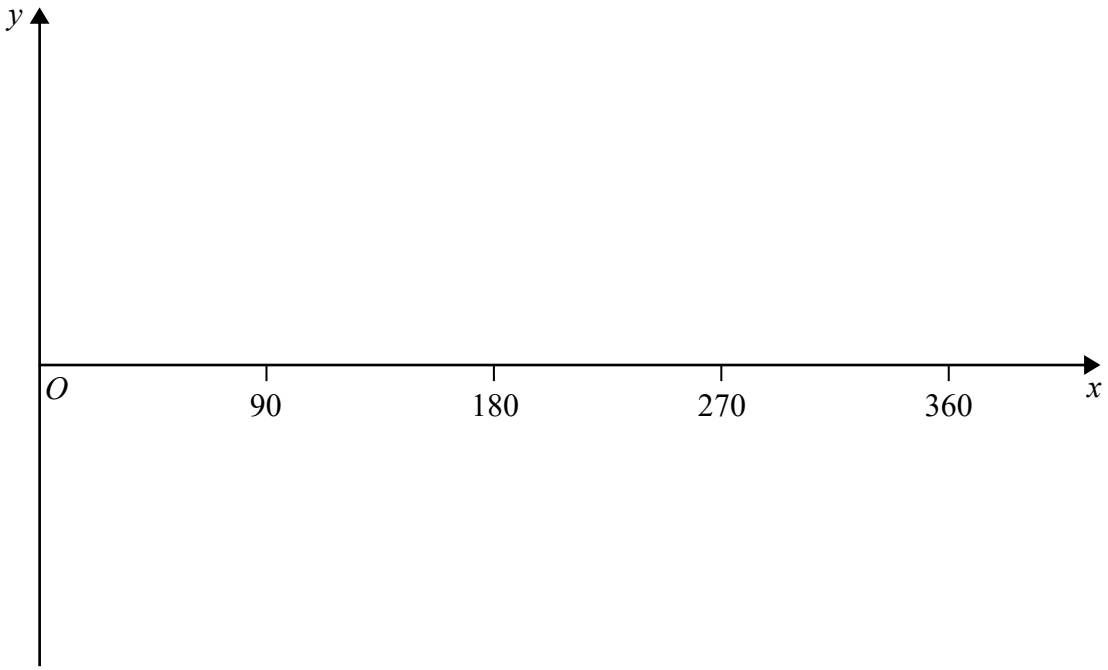
1 Here is the graph of $y = \sin x°$ for $-180 \leqslant x \leqslant 180$



On the grid, sketch the graph of $y = \sin x° - 2$ for $-180 \leqslant x \leqslant 180$

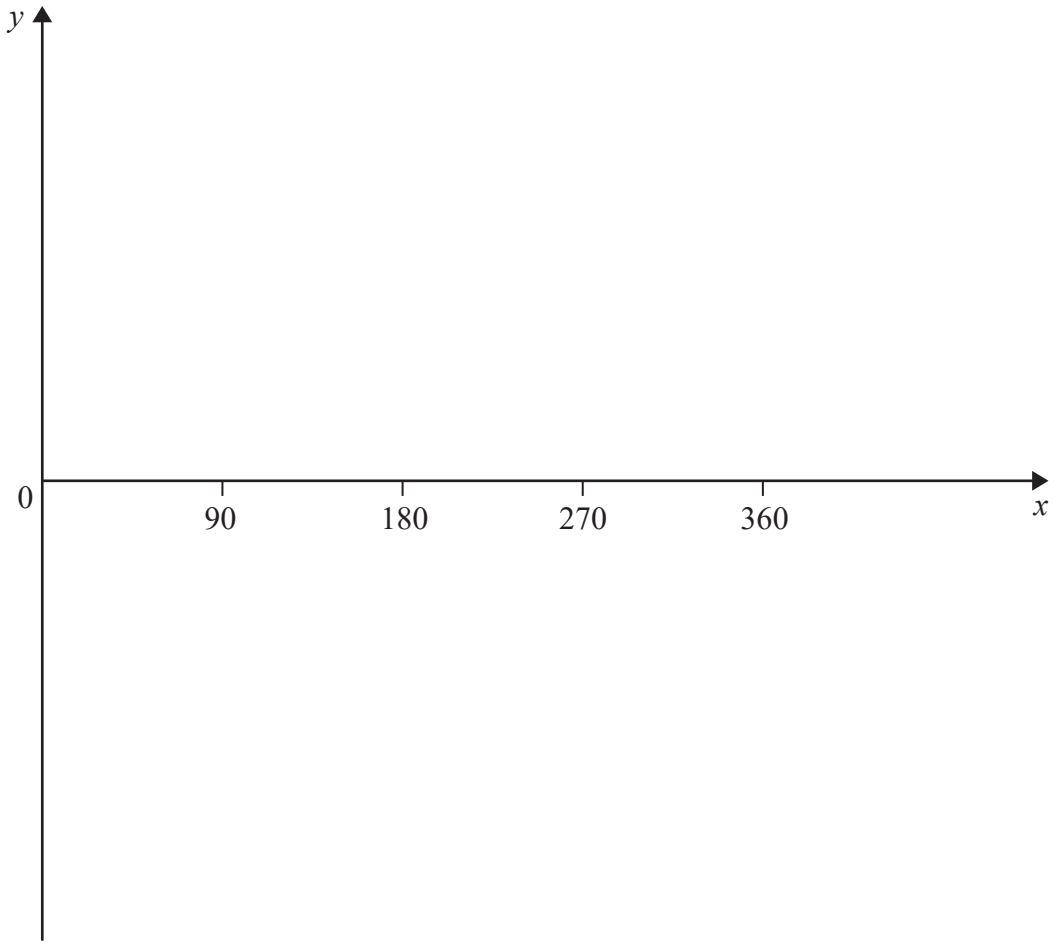
(Total for Question 1 is 2 marks)

2 (a) Sketch the graph of $y = \cos x°$ for $0 \leqslant x \leqslant 360$



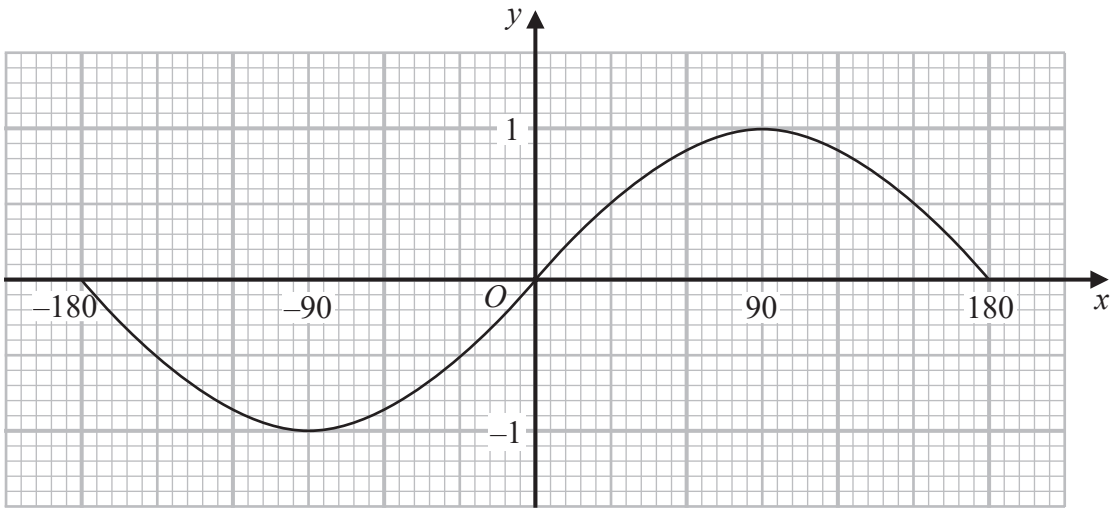
(Total for Question 2 is 2 marks)

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



(Total for Question 3 is 2 marks)

4 Here is the graph of $y = \sin x°$ for $-180 \leqslant x \leqslant 180$



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

$$\sin x° = 0.3 \quad \text{for } -180 \leqslant x \leqslant 180$$

.....

(2)

(b) Write down a value of x such that

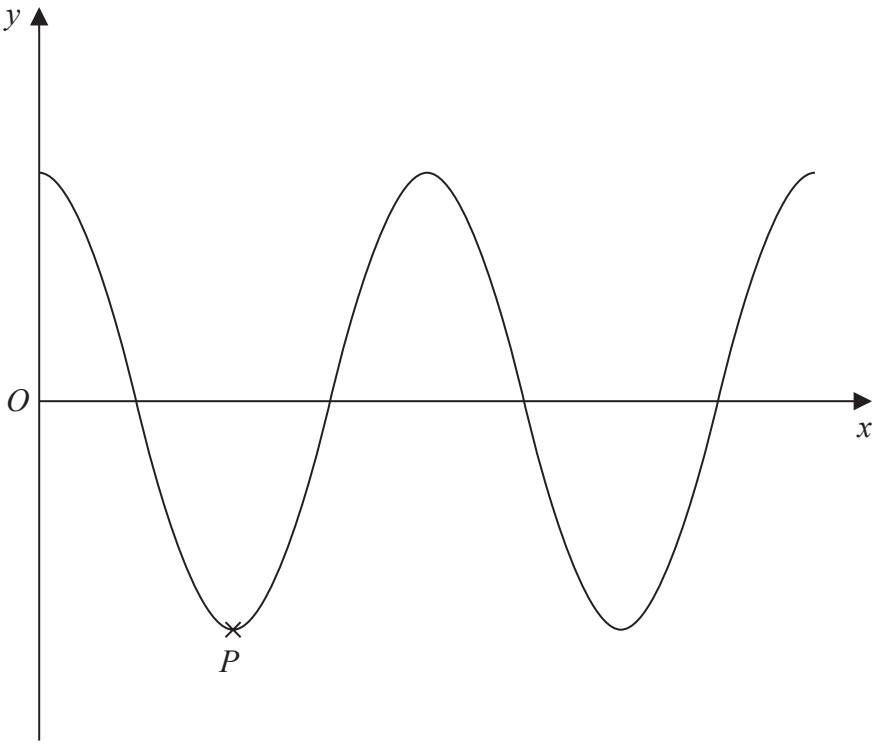
$$\sin(x + 20)° = 0 \quad \text{for } -180 \leqslant x \leqslant 180$$

$x =$ .....

(1)

(Total for Question 4 is 3 marks)

5



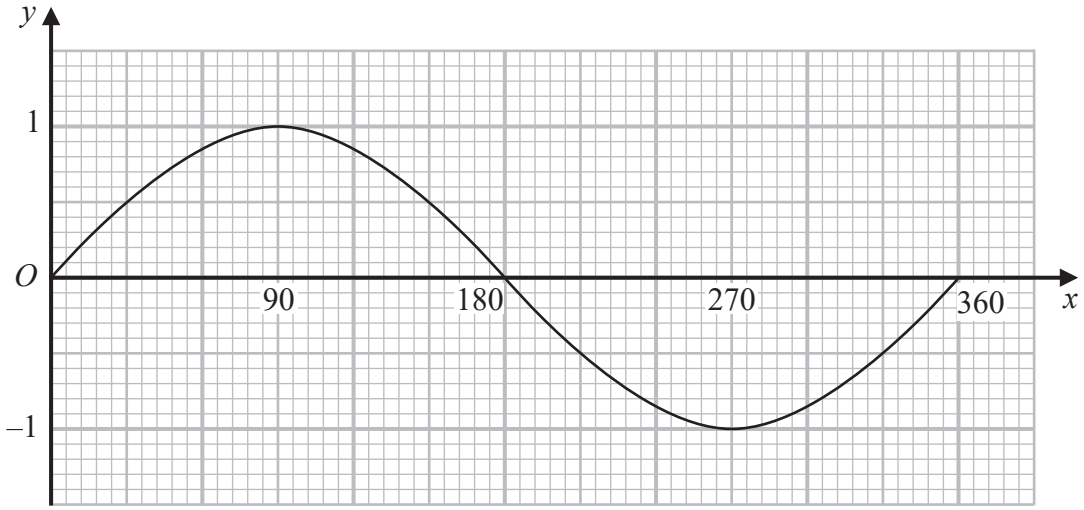
The diagram shows a sketch of part of the curve with equation $y = \cos x°$
P is a minimum point on the curve.

Write down the coordinates of P.

(..... , ...)

(Total for Question 5 is 2 marks)

6 Here is a graph of $y = \sin x°$ for $0 \leqslant x \leqslant 360$



(a) Using this graph, find estimates of all **four** solutions of

$$\sin x° = 0.6 \quad \text{for } 0 \leqslant x \leqslant 720$$

.....

(2)

The graph of $y = \sin x°$ is reflected in the x-axis.

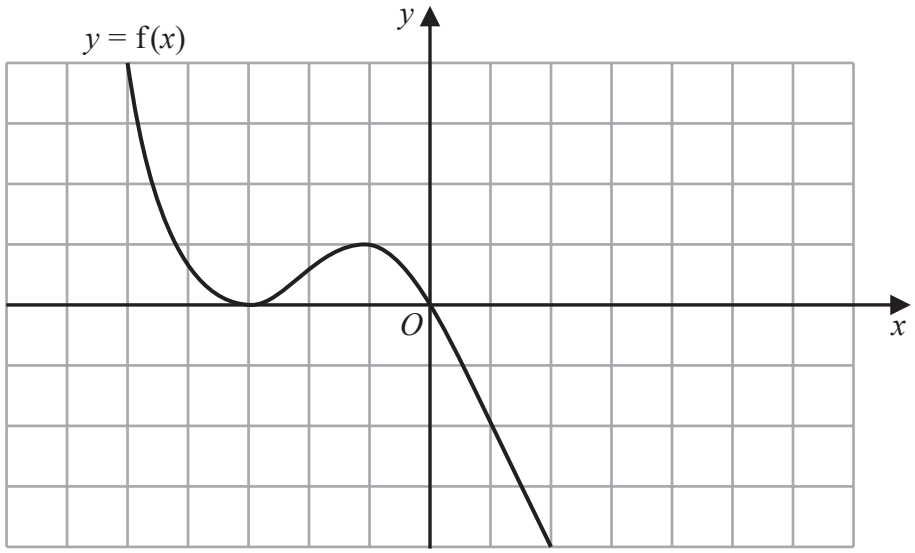
(b) Write down an equation of the reflected graph.

.....

(1)

(Total for Question 6 is 3 marks)

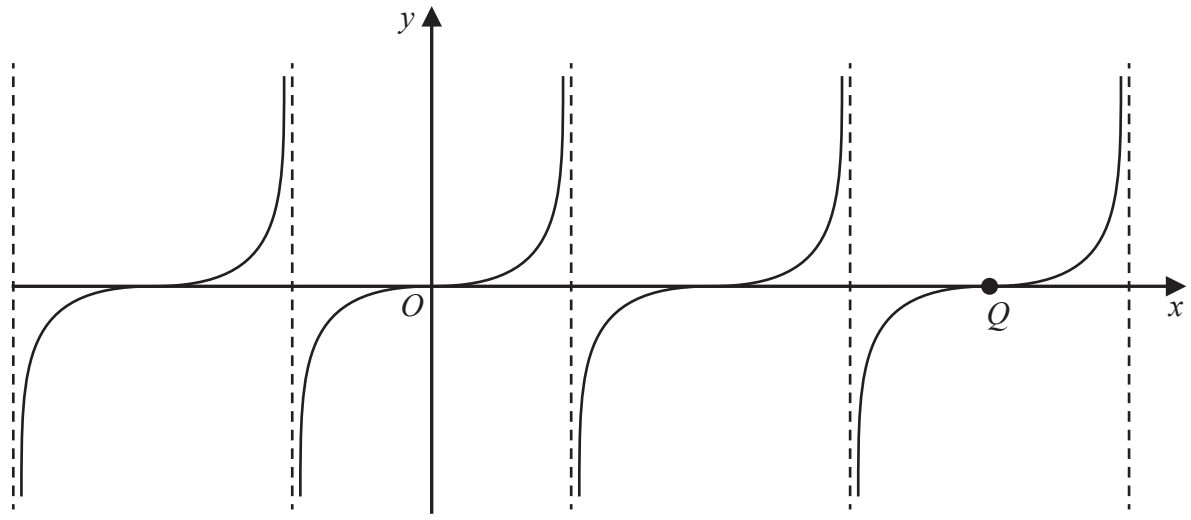
7 The graph of $y = f(x)$ is shown on the grid below.



(a) On the grid above, sketch the graph of $y = f(-x)$

(1)

Here is a sketch of the graph of $y = \tan x°$



The graph of $y = \tan x°$ is translated to give the graph of $y = g(x)$

Following the translation the point Q, shown on the graph above, moves to point R.
Point R has coordinates $(90, -5)$

(b) Find an expression for $g(x)$ in terms of x.

.....

(2)

(Total for Question 7 is 3 marks)