



# Trigonometric Graphs



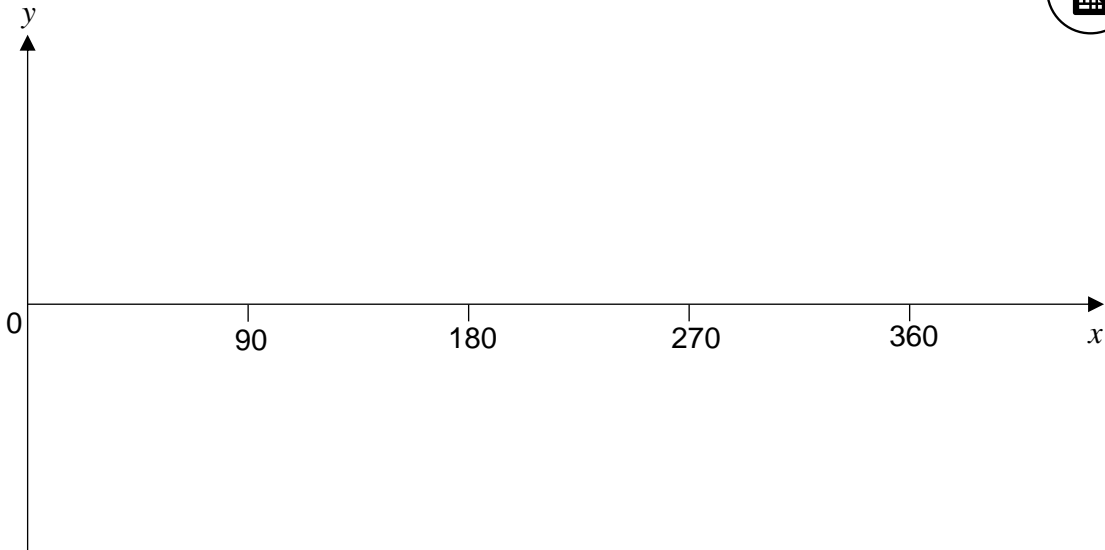
SCAN ME

REVISE THIS TOPIC

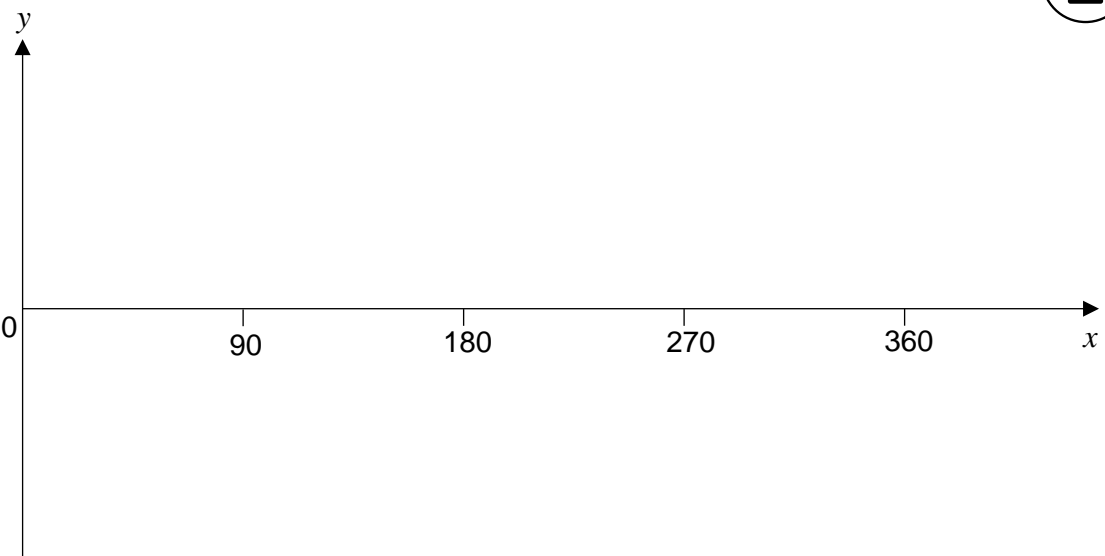
CHECK YOUR ANSWERS

SCAN ME

1 Sketch the graph of  $y = \sin x^\circ$  for  $0 \leq x \leq 360$  [2 marks]

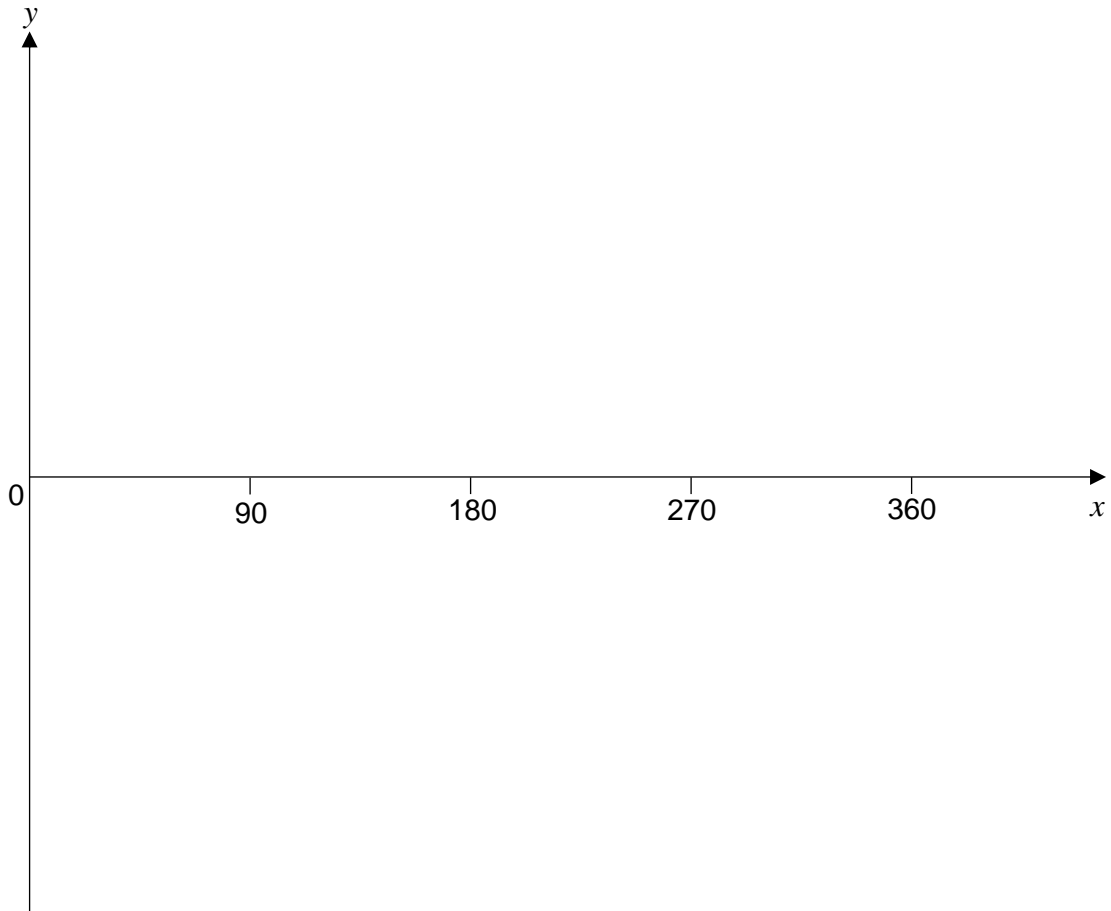


2 Sketch the graph of  $y = \cos x^\circ$  for  $0 \leq x \leq 360$  [2 marks]

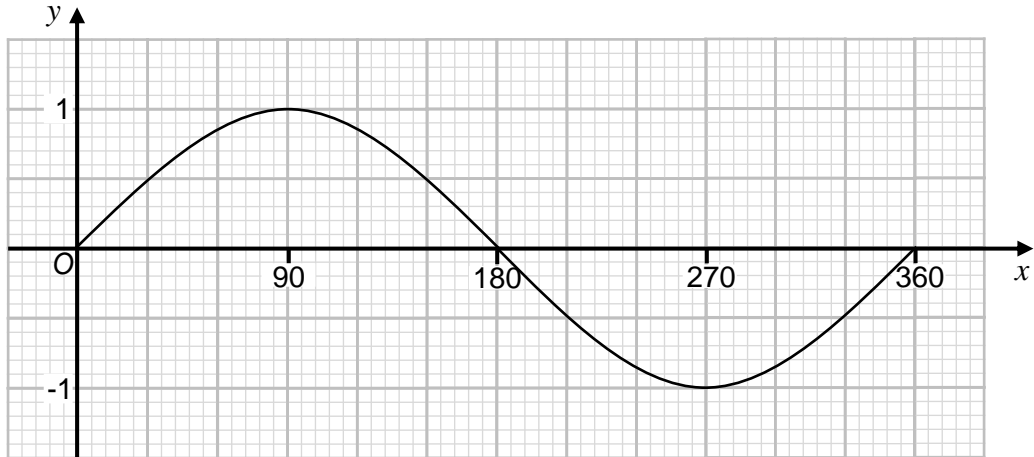




3 Sketch the graph of  $y = \tan x^\circ$  for  $0 \leq x \leq 360$  [2 marks]



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



4 (a) Use the graph to find estimates for the solutions of [2 marks]

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

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Answer \_\_\_\_\_

4 (b) Use the graph to find estimates for the solutions of [2 marks]

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

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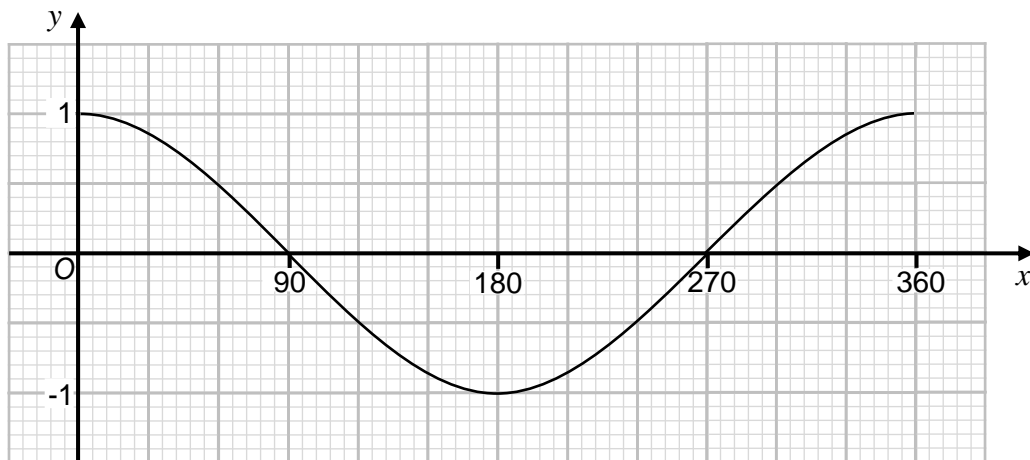
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Answer \_\_\_\_\_



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



5 (a) Use the graph to find estimates for the solutions of [2 marks]

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

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Answer \_\_\_\_\_

5 (b) Use the graph to find estimates for the solutions of [2 marks]

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

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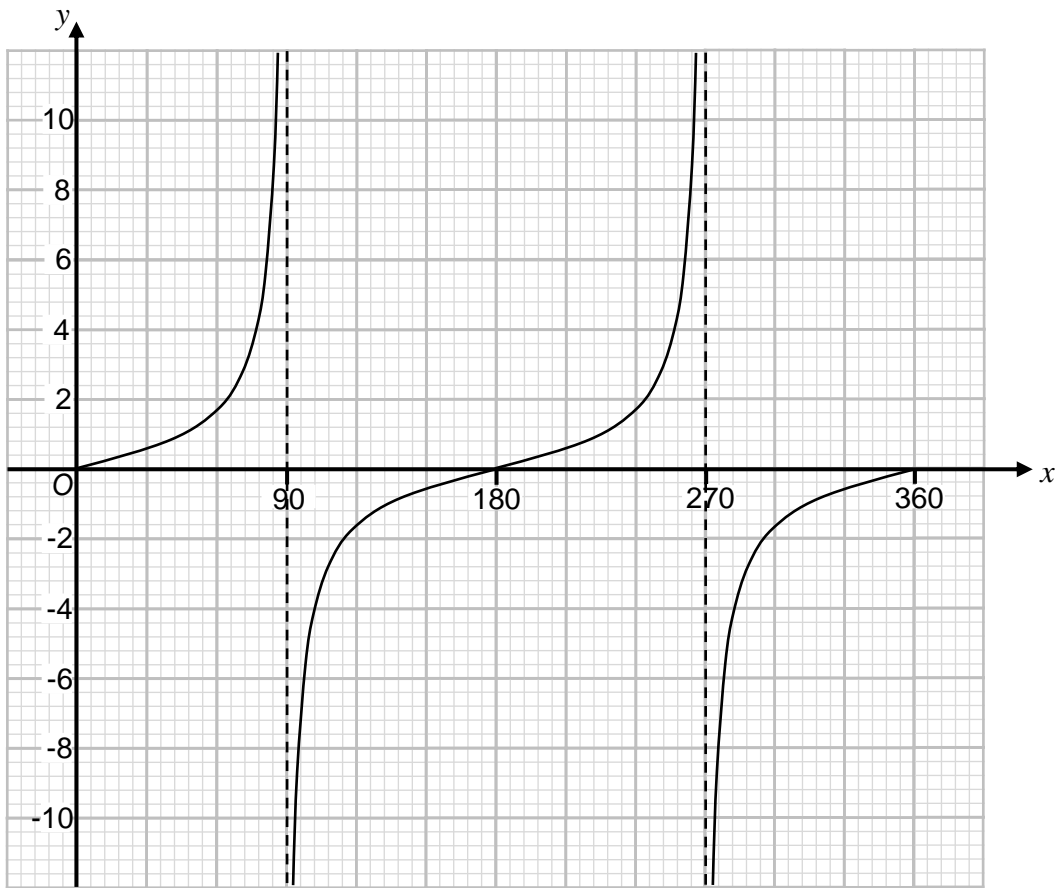
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Answer \_\_\_\_\_



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



6 (a) Use the graph to find estimates for the solutions of [2 marks]

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

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Answer \_\_\_\_\_

6 (b) Use the graph to find estimates for the solutions of [2 marks]

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

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Answer \_\_\_\_\_

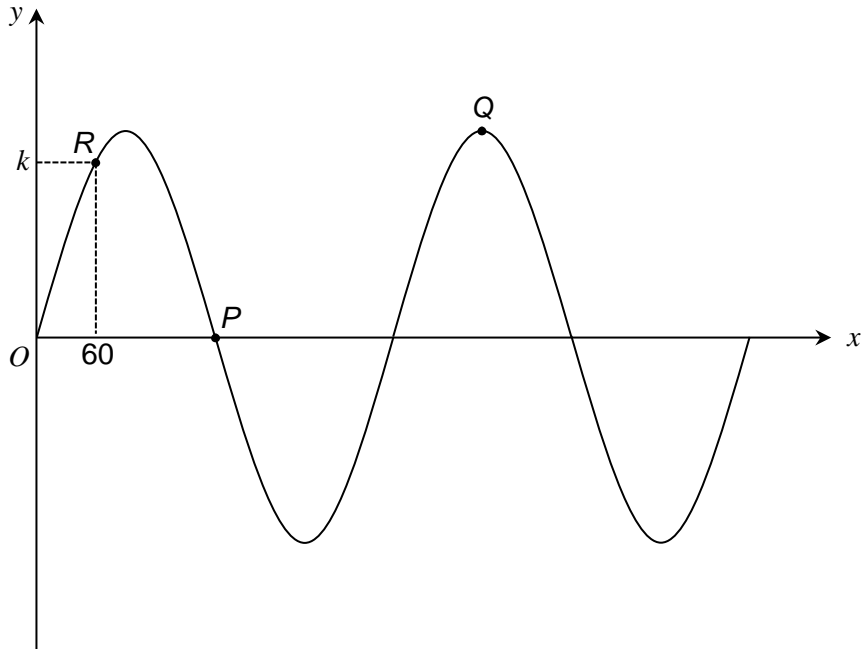
$\frac{\quad}{8}$
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Turn over ►





7 Here is a sketch of  $y = \sin x^\circ$  for  $0 \leq x \leq 720$



7 (a) Write down the coordinates of  $P$ .

[1 mark]

Answer ( \_\_\_\_\_ , \_\_\_\_\_ )

7 (b) Write down the coordinates of  $Q$ .

[1 mark]

Answer ( \_\_\_\_\_ , \_\_\_\_\_ )

7 (c) Write down the exact value of  $k$ .

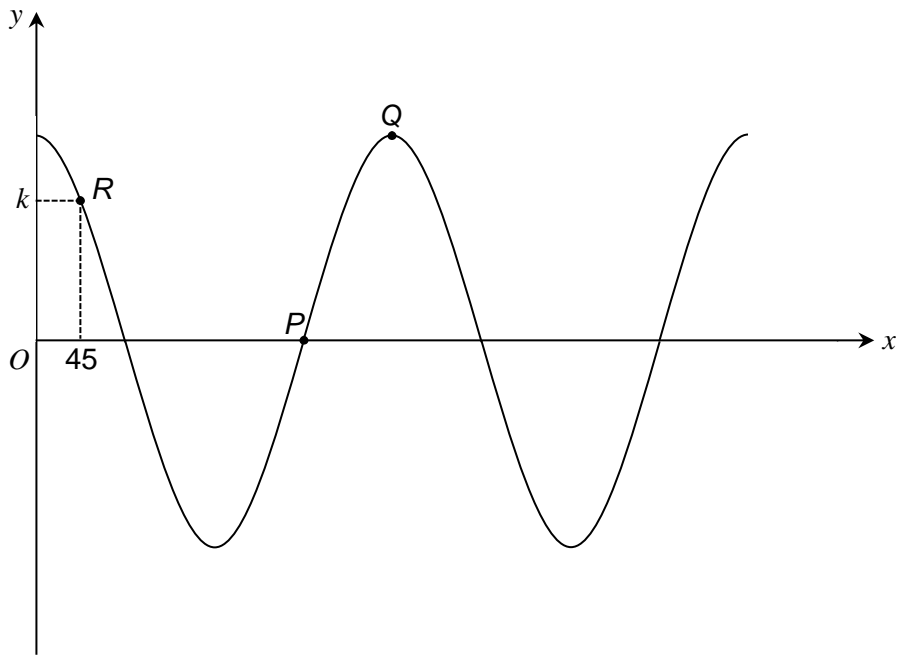
[1 mark]

$k =$  \_\_\_\_\_





8 Here is a sketch of  $y = \cos x^\circ$  for  $0 \leq x \leq 720$



8 (a) Write down the coordinates of  $P$ .

Answer ( \_\_\_\_\_ , \_\_\_\_\_ )

8 (b) Write down the coordinates of  $Q$ .

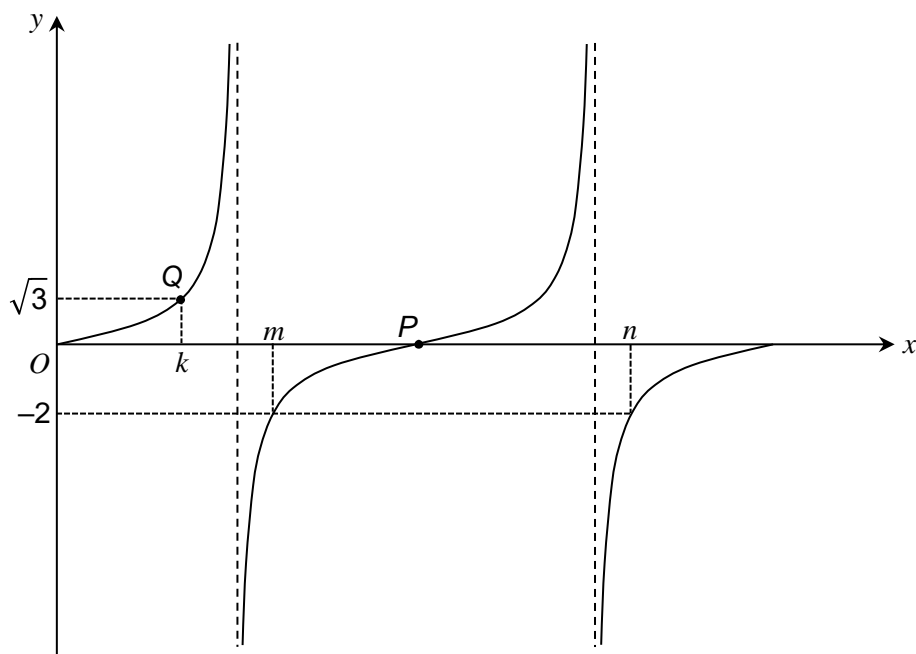
Answer ( \_\_\_\_\_ , \_\_\_\_\_ )

8 (c) Write down the exact value of  $k$ .

$k =$  \_\_\_\_\_



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



9 (a) Write down the coordinates of  $P$ . [1 mark]

Answer ( \_\_\_\_\_ , \_\_\_\_\_ )

9 (b) Write down the value of  $k$ . [1 mark]

$k =$  \_\_\_\_\_

9 (c)  $0 < m < 360$  ,  $0 < n < 360$  and  $m < n$  [1 mark]

$$\tan m^\circ = \tan n^\circ = -2$$

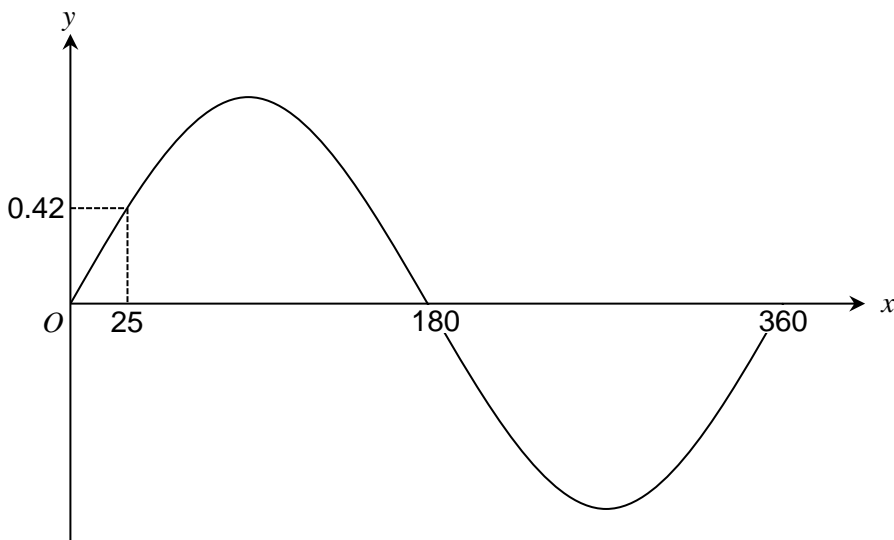
Express  $n$  in terms of  $m$ .

Answer \_\_\_\_\_





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



$$\sin(25^\circ) = 0.42 \text{ (to 2 decimal places)}$$

$$\sin(p^\circ) = \sin(q^\circ) = \sin(25^\circ) \text{ where } 90^\circ < p < 180^\circ \text{ and } 360^\circ < q < 450^\circ$$

10 (a) Write down the value of  $p$ . [1 mark]

$$p = \underline{\hspace{2cm}}$$

10 (b) Write down the value of  $q$ . [1 mark]

$$q = \underline{\hspace{2cm}}$$

$$\sin(a^\circ) = \sin(b^\circ) = -0.42$$

$$\text{where } a < b \text{ and } 180^\circ < a < 360^\circ \text{ and } 180^\circ < b < 360^\circ$$

10 (c) Write down the values of  $a$  and  $b$ . [2 marks]

$$a = \underline{\hspace{2cm}} \quad b = \underline{\hspace{2cm}}$$

$\frac{\quad}{7}$
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