

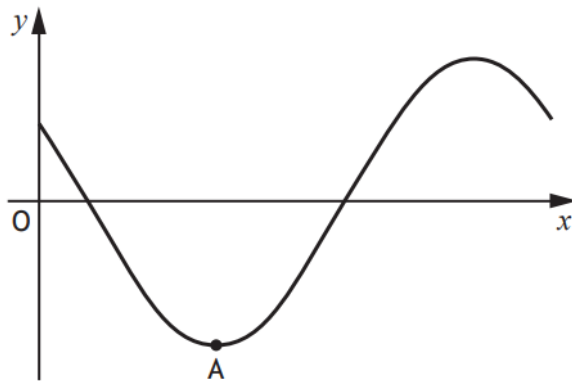
Trig Graphs

N5 Maths Exam Questions

Source: 2019 P1 Q13 N5 Maths

(1)

Part of the graph of $y = 3 \cos(x + 45)^\circ$ is shown in the diagram.



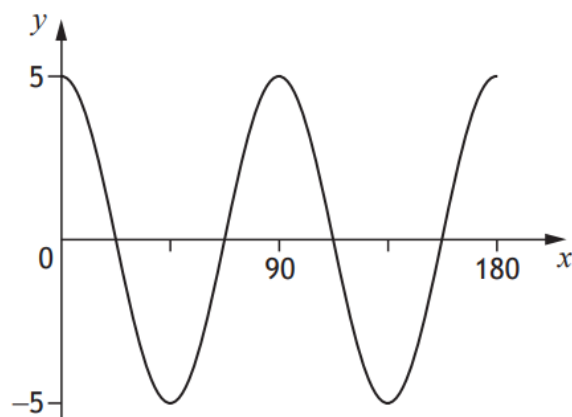
The graph has a minimum turning point at A.
State the coordinates of A.

Answers: $A(135, -3)$

Source: 2018 P1 Q6 N5 Maths

(2)

Part of the graph of $y = a \cos bx^\circ$ is shown in the diagram.



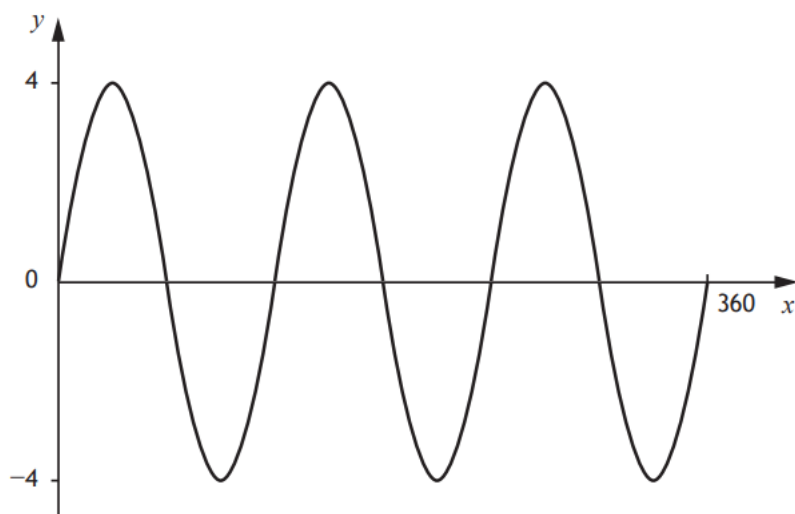
State the values of a and b .

Answers: $a = 5, b = 4$

Source: 2015 P1 Q6 N5 Maths

(3)

Part of the graph of $y = a \sin bx^\circ$ is shown in the diagram.



State the values of a and b .

Answers: $a = 4$, $b = 3$

Source: 2015 P1 Q9 N5 Maths

(4)

Write the following in order of size starting with the smallest.

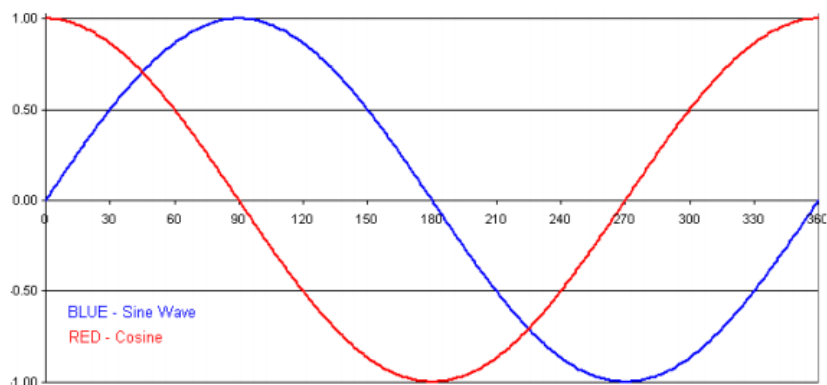
$$\cos 90^\circ \quad \cos 100^\circ \quad \cos 300^\circ$$

Justify your answer.

Answer:

As per the cosine wave shown in red below;

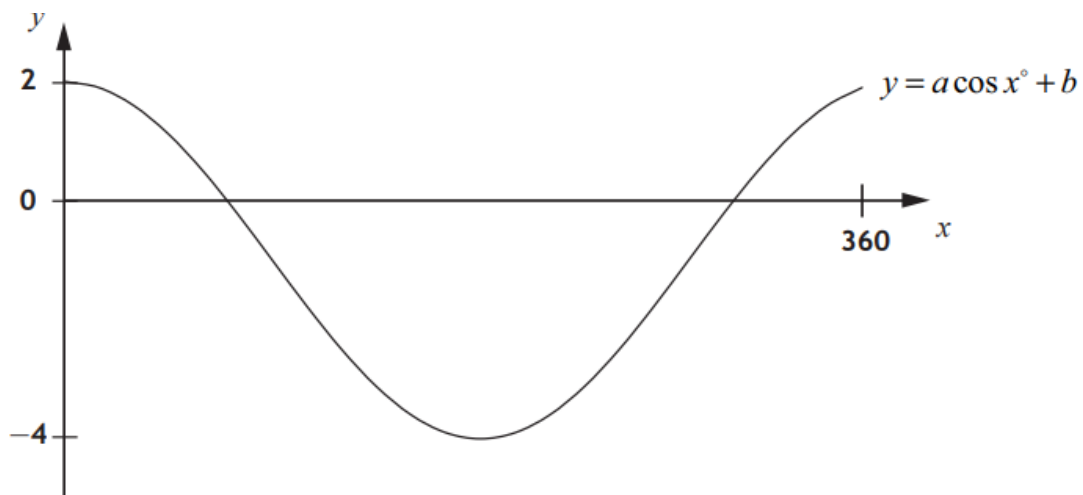
$\cos 100^\circ$ (negative), $\cos 90^\circ$ (zero) and $\cos 300^\circ$ (positive)



Source: Specimen P2 Q10 N5 Maths

(5)

Part of the graph of $y = a \cos x^\circ + b$ is shown below.



- (a) Explain how you can tell from the graph that $a = 3$ and $b = -1$.
- (b) Calculate the x -coordinates of the points where the graph cuts the x -axis.

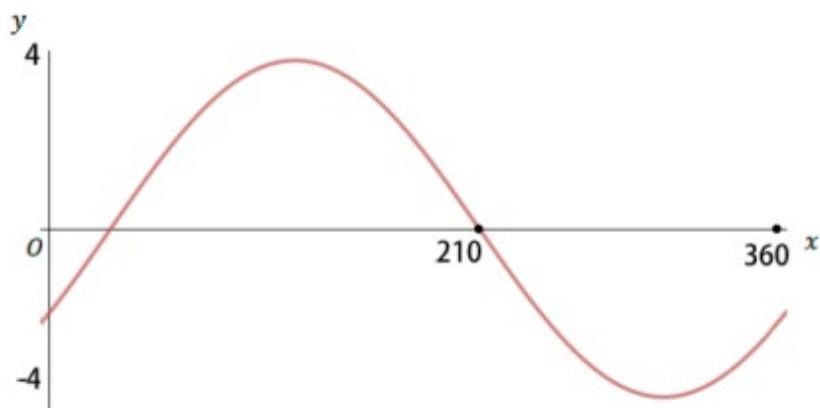
Answers: (a) Amplitude is 3 (half 6) and the graph has shifted down 1 position

(b) $x = 70.5^\circ, x = 289.5^\circ$

Source: Practice C P1 Q6 N5 Maths

(6)

Part of the graph of $y = a \sin(x + b)^\circ$ is shown in the diagram.



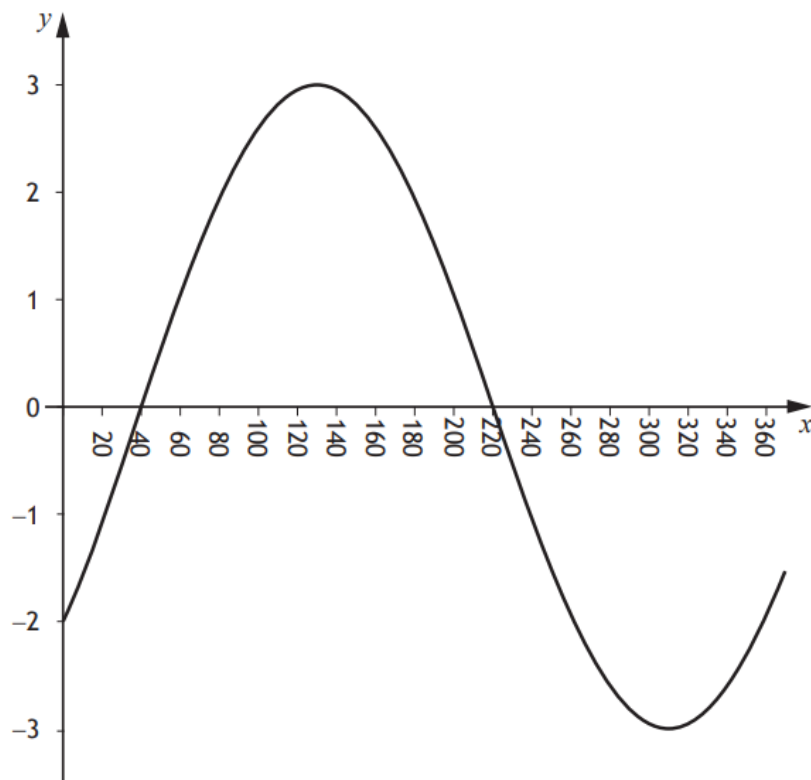
State the values of a and b .

Answers: $a = 4, b = -30$

Source: 2014 N5 P1 Q10 N5 Maths

(7)

The graph of $y = a \sin(x + b)^\circ$, $0 \leq x \leq 360$, is shown below.

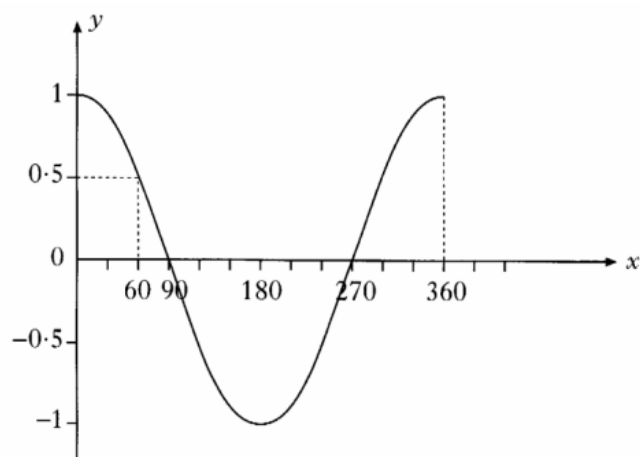


Write down the values of a and b .

Answers: $a = 3$, $b = -40$

Source: Practice B P1 Q8 N5 Maths

(8)



Part of the graph of $y = \cos x^\circ$ is shown above.

If $\cos 60^\circ = 0.5$, state two values for x for which $\cos x^\circ = -0.5$, $0 \leq x \leq 360$.

Answers: $x = 120^\circ$, $x = 240^\circ$