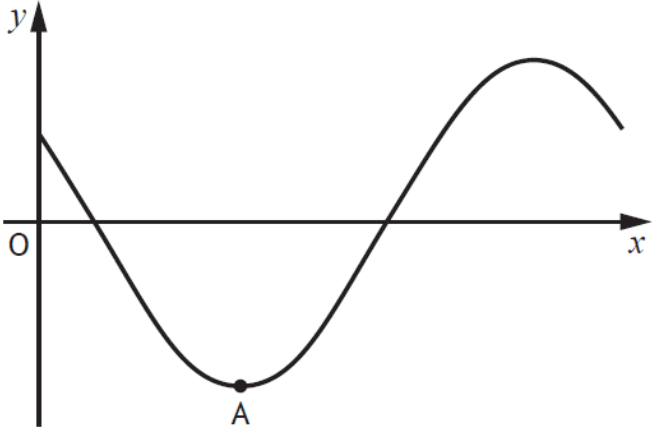
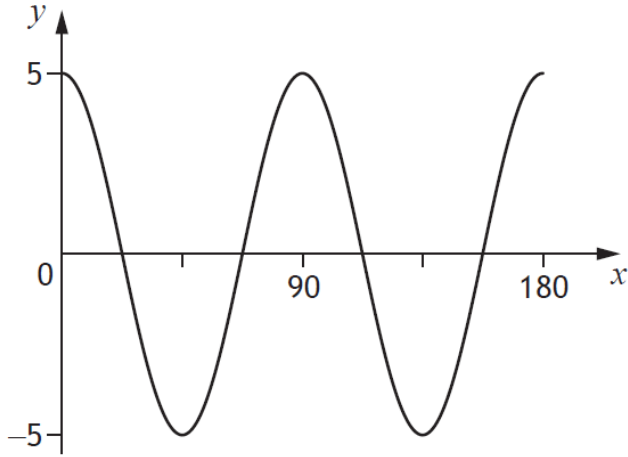
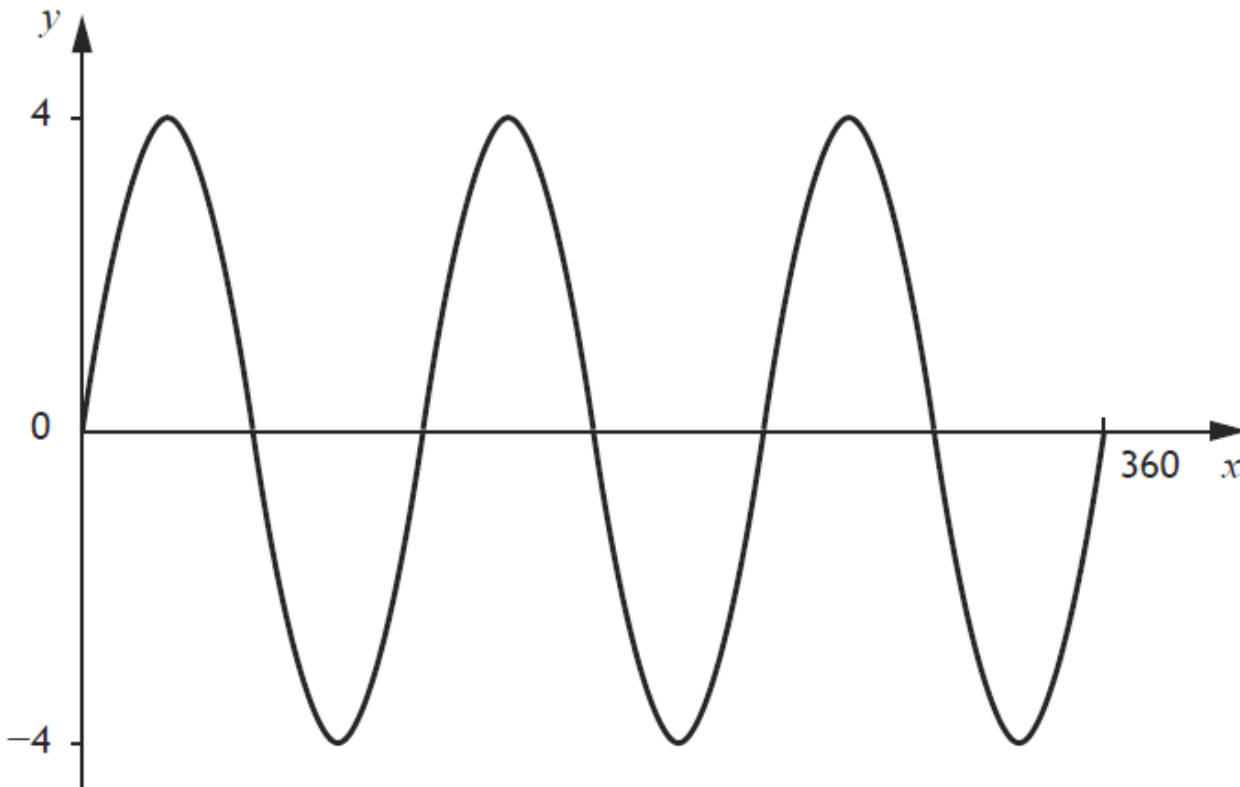
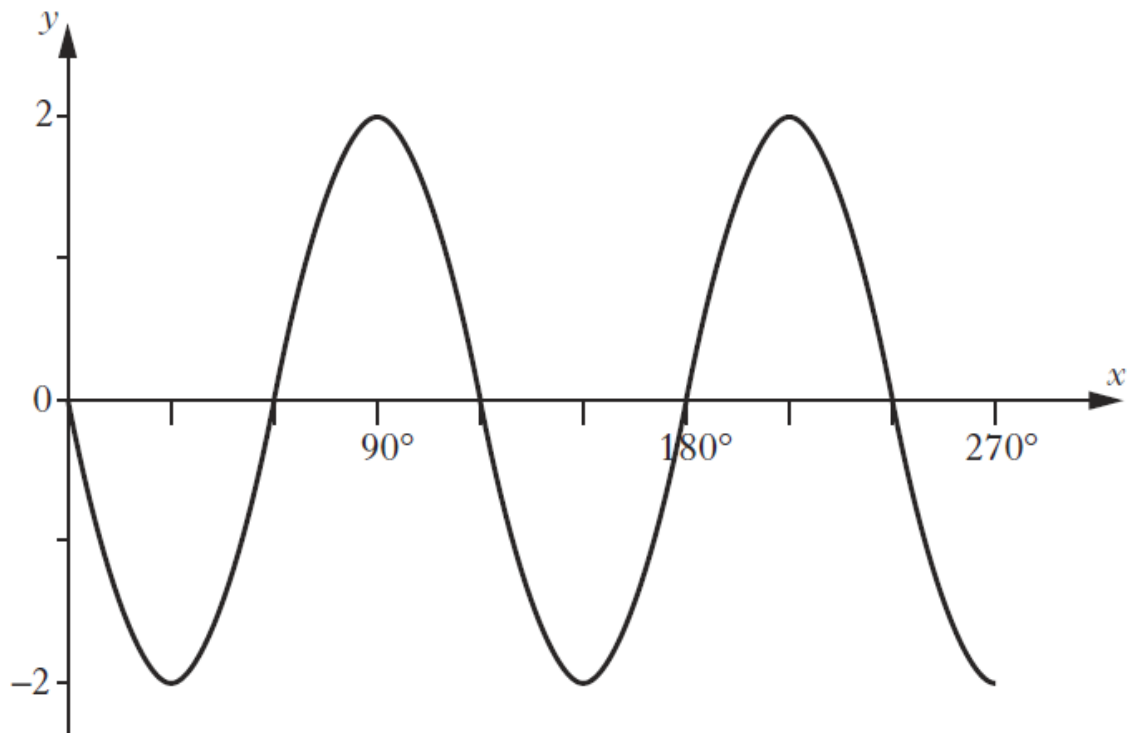


Nat 5/Credit/Int 2: Trig Graphs

Nat 5 2019 P1 Q13	13. 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.	2
Ans	(135,-3)	2
Nat 5 2018 P1 Q6	6. Part of the graph of $y = a\cos bx^\circ$ is shown in the diagram.  State the values of a and b.	2
Ans	$a = 5$, $b = 4$	2
Nat 5 2018 P1 Q12	12. Given that $\cos 60^\circ = 0.5$, state the value of $\cos 240^\circ$.	1
Ans	-0.5	1

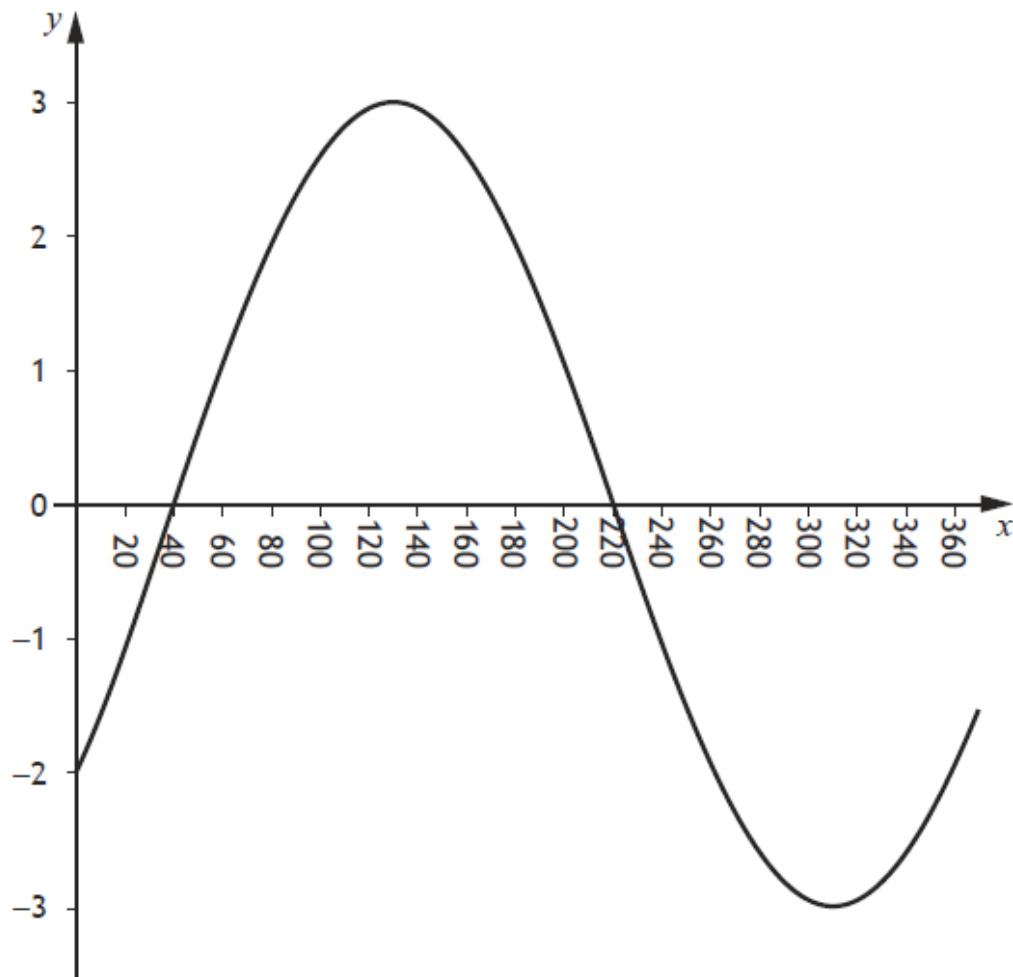
Nat 5 2015 P1 Q5	Part of the graph of $y = a \sin bx^\circ$ is shown in the diagram.  State the values of a and b.	2
Ans	$a = 4, b = 3$	
Nat 5 2015 P1 Q9	Write the following in order of size starting with the smallest. $\cos 90^\circ$ $\cos 100^\circ$ $\cos 300^\circ$ Justify your answer.	2
Ans	$\cos 100^\circ, \cos 90^\circ, \cos 300^\circ$ because $\cos 100^\circ$ is negative, $\cos 90^\circ$ is zero and $\cos 300^\circ$ is positive	

Part of the graph of a trigonometric function is shown below.



State the period, in degrees, of this function.

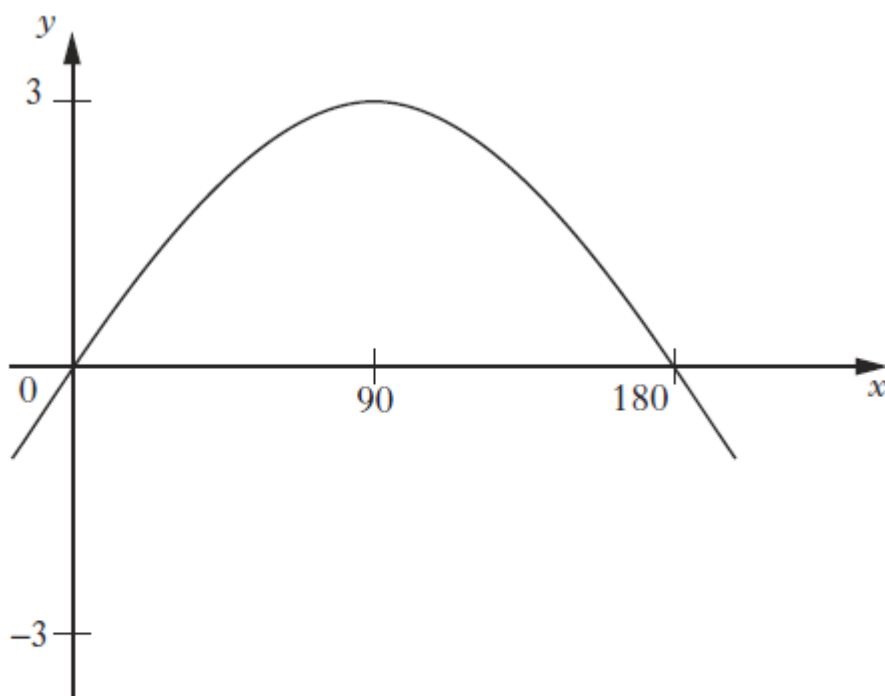
The graph of $y = a \sin(x + b)^\circ$, $0 \leq x \leq 360$, is shown below.



Write down the values of a and b .

Ans

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



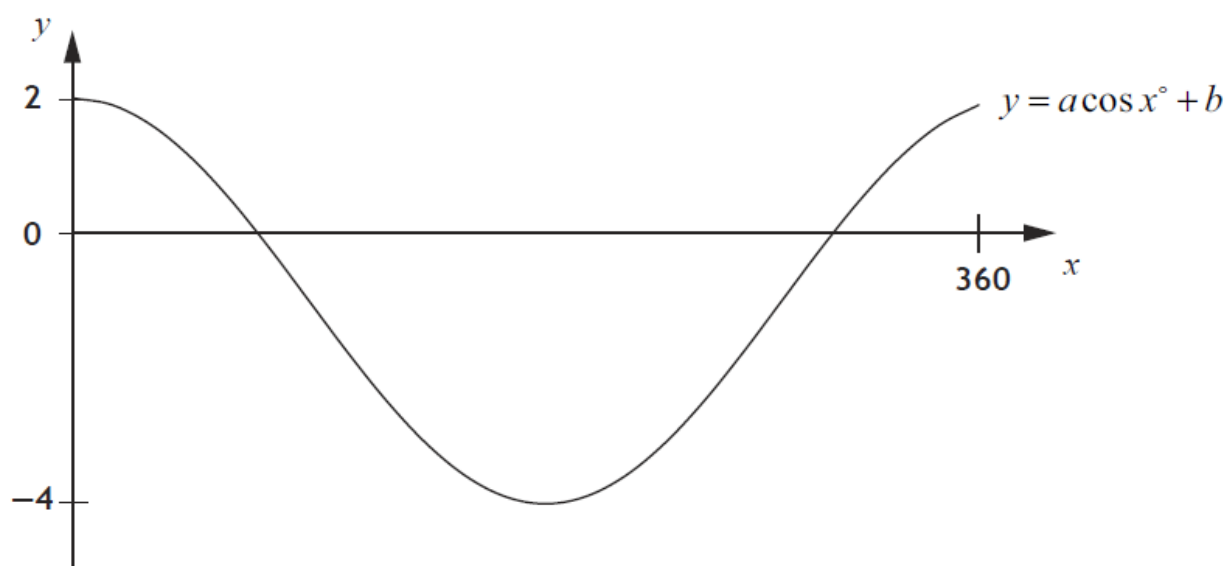
Part of the graph of $y = a \sin bx^\circ$ is shown in the diagram.

State the values of a and b .

Ans

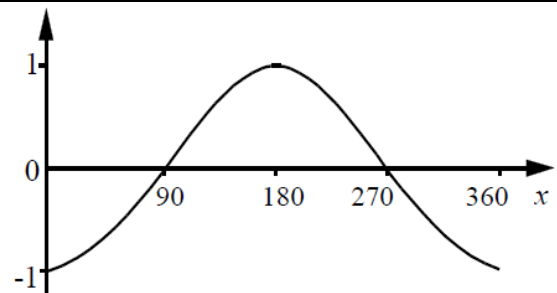
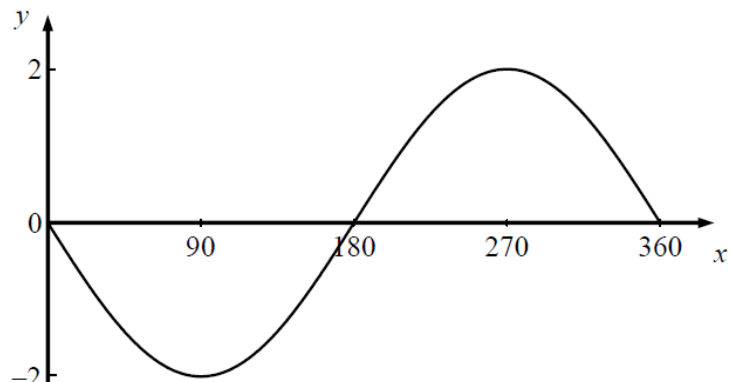
$a = 3, b = 1$

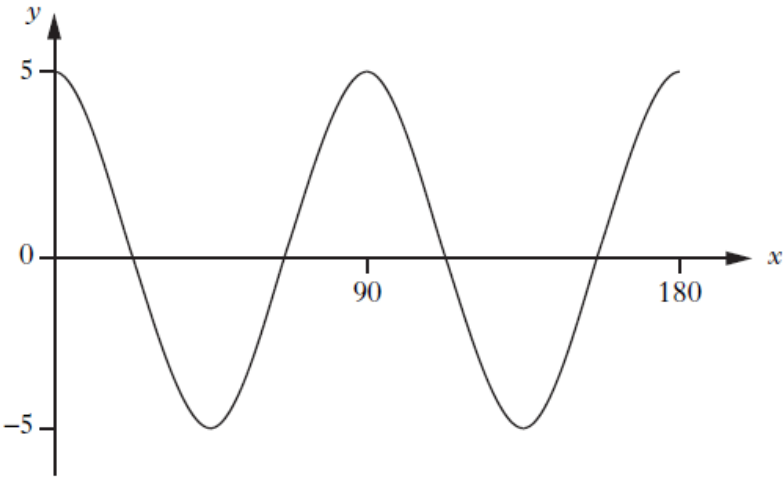
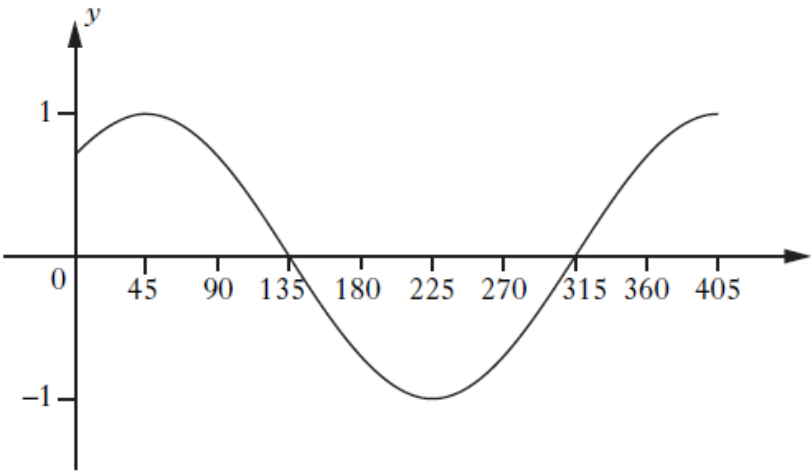
Part of the graph of $y = a \cos x^\circ + b$ is shown below.

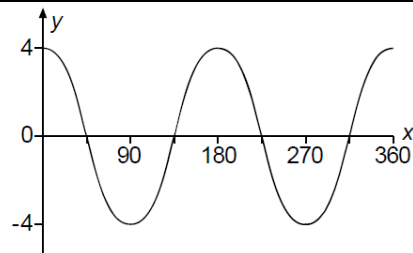
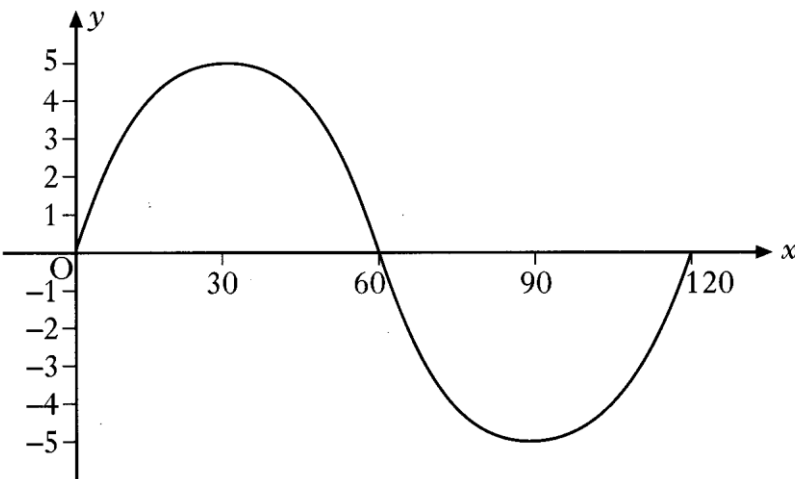


(a) Explain how you can tell from the graph that $a = 3$ and $b = -1$.

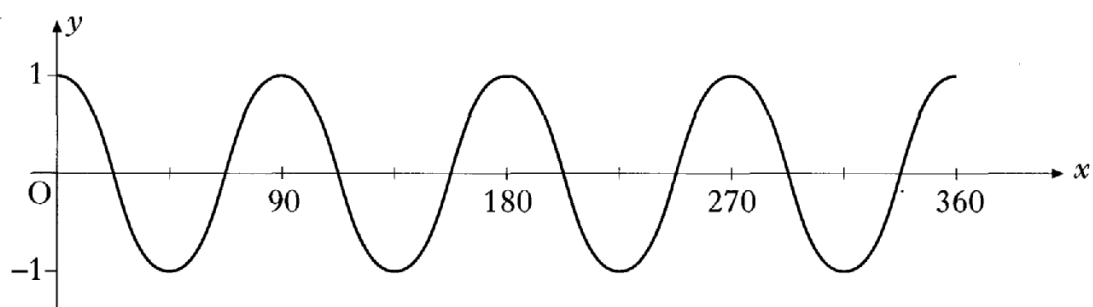
(b) Calculate the x -coordinates of the points where the graph cuts the x -axis.

Ans	(a) Half of $[2 - (-4)]$ and graph of $y = \cos x^\circ$ moved down 1. (b) 70.5° and 289.5°	
Int 2 2013 P1 Q10	Sketch the graph of $y = \sin (x - 90)^\circ$, $0 \leq x \leq 360$.	3
Ans		
Int 2 2013 P1 Q8	State the period of $y = \sin 2x^\circ$.	1
Ans	180°	
Int 2 2012 P1 Q9	Sketch the graph of $y = -2 \sin x^\circ$, $0 \leq x \leq 360$.	3
Ans		

Int 2 2011 P1 Q7	Part of the graph of $y = a \cos bx^\circ$ is shown in the diagram.  State the values of a and b.	2
Ans	$a = 5, b = 4$	
Int 2 2010 P1 Q9	The graph shown below has an equation of the form $y = \cos(x - a)^\circ$.  Write down the value of a.	1
Ans	45	
Int 2 2009 P1 Q8	Sketch the graph of $y = 4 \cos 2x^\circ$, $0 \leq x \leq 360$.	3

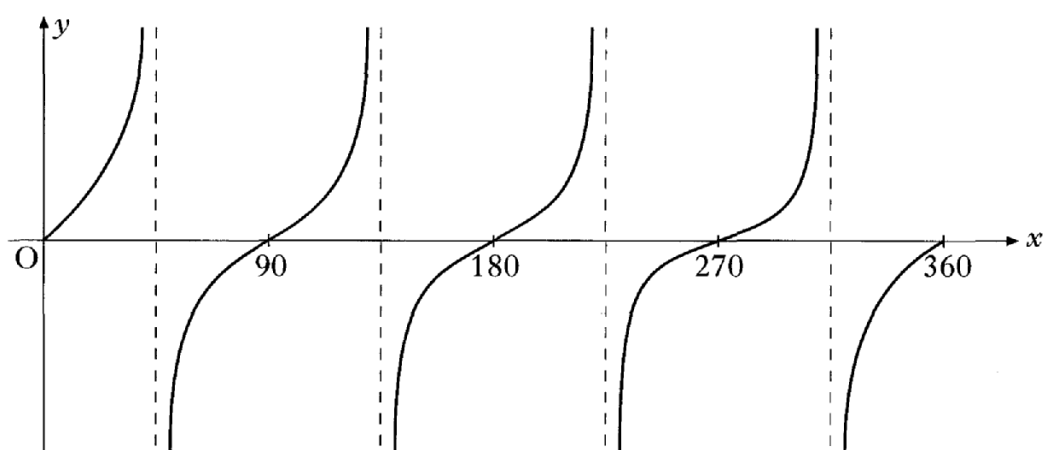
Ans		
Int 2 2008 P1 Q8	Part of the graph of $y = a \sin bx^\circ$ is shown in the diagram.  State the values of a and b.	2
Ans	$a = 5$ $b = 3$	

(a) Part of the graph of $y = \cos ax^\circ$ is shown below.



State the value of a .

(b) Part of the graph of $y = \tan bx^\circ$ is shown below.

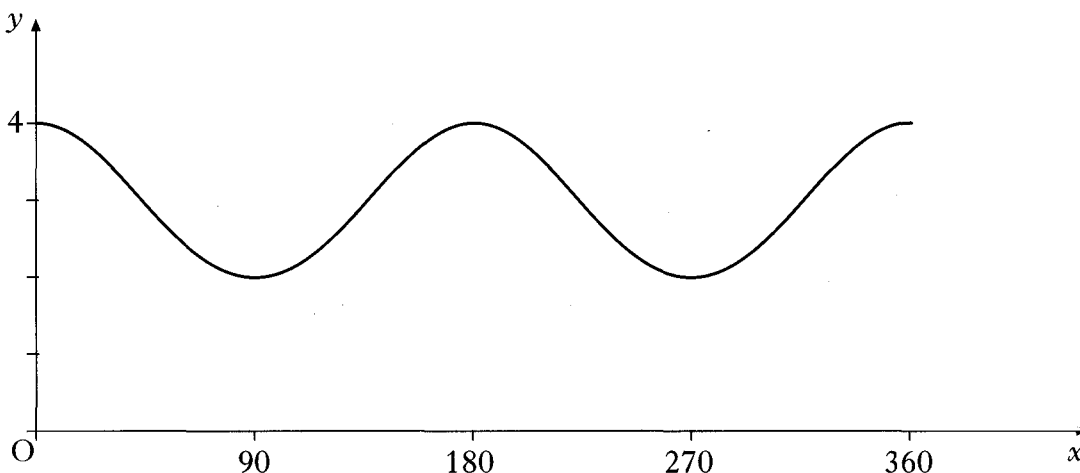
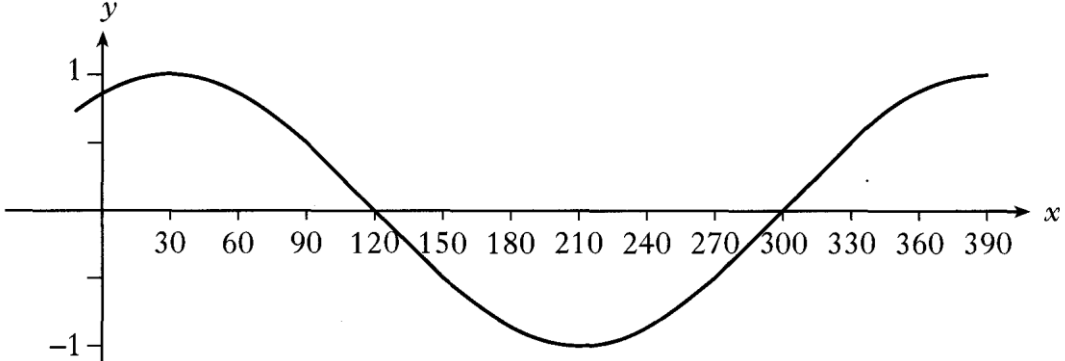


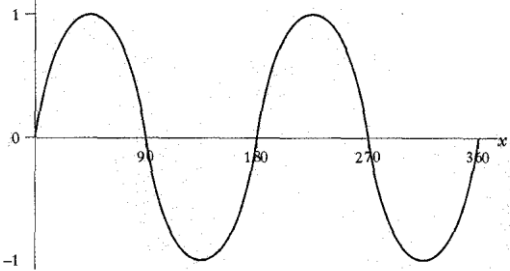
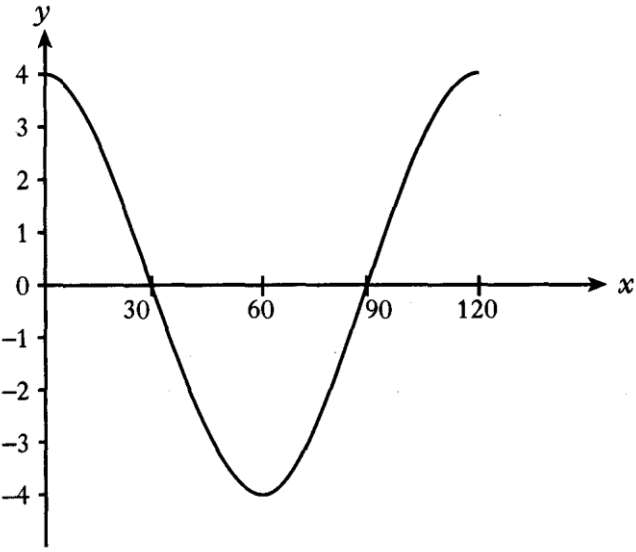
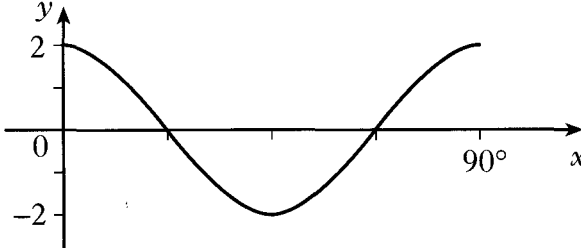
State the value of b .

1

1

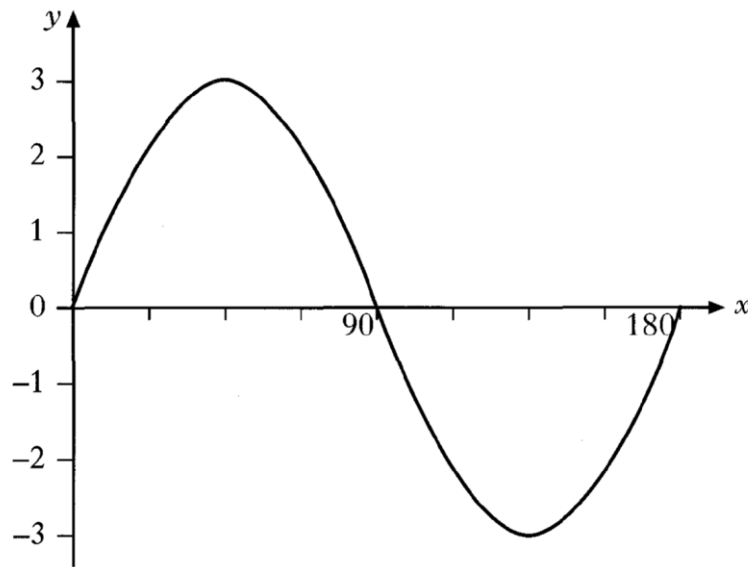
Ans (a) $a = 4$ (b) $b = 2$

Credit 2007 P1 Q13	13. Part of the graph of $y = \cos bx^\circ + c$ is shown below.  Write down the values of b and c.	2
Ans	$b = 2, c = 3$	
Int 2 2006 P1 Q8	The graph shown below has an equation of the form $y = \cos(x - a)^\circ$.  Write down the value of a.	1
Ans	$a = 30$	
Int 2 2005 P1 Q7	Sketch the graph of $y = \sin 2x^\circ, \quad 0 \leq x \leq 360.$	3

Ans		
Int 2 2004 P1 Q6a	(a) Part of the graph of $y = b \cos ax^\circ$ is shown in the diagram.  State the values of a and b	2
Ans	$a = 3$ $b = 4$	
Credit 2004 P1 Q9	9. The graph of $y = a \cos bx^\circ$, $0 \leq x \leq 90$, is shown below.  Write down the values of a and b.	2
Ans	$a = 2$, $b = 4$	

Int 2 2003 P1 Q5

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



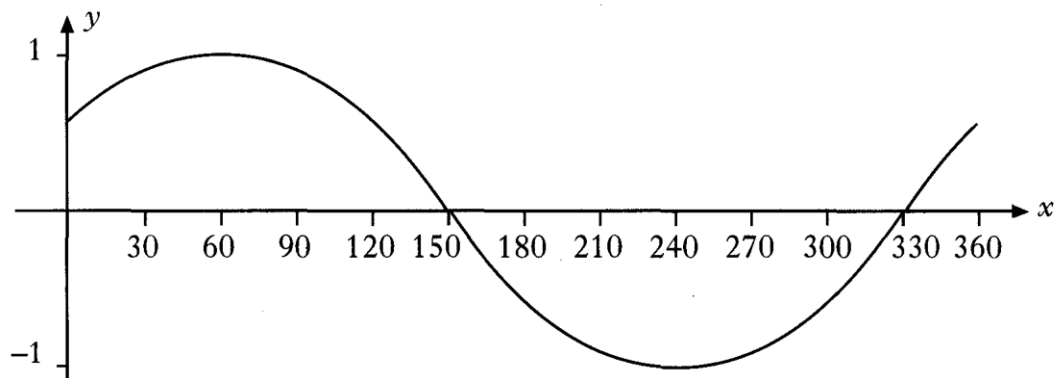
State the values of a and b .

2

Ans $a = 3$ $b = 2$

Int 2 2002W P1 Q6

The graph shown below has an equation of the form $y = \cos(x - b)^\circ$.

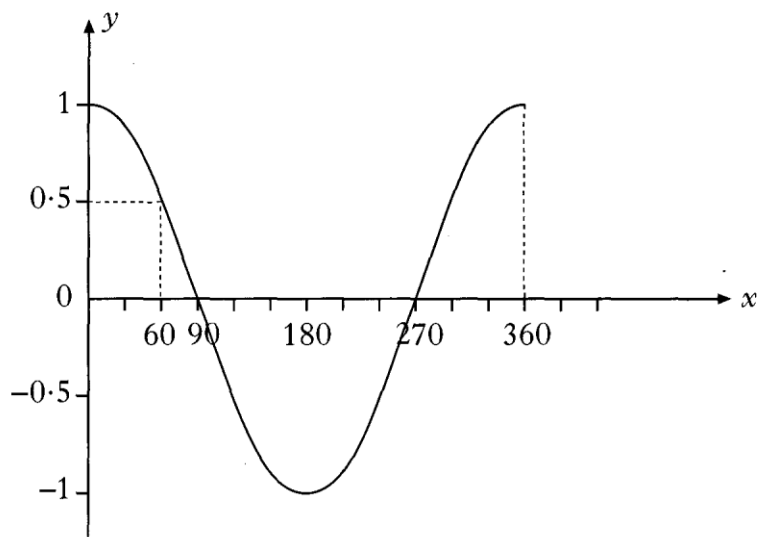


Write down the value of b .

1

Ans $b = 60$

Int 2 2002 P1 Q3



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

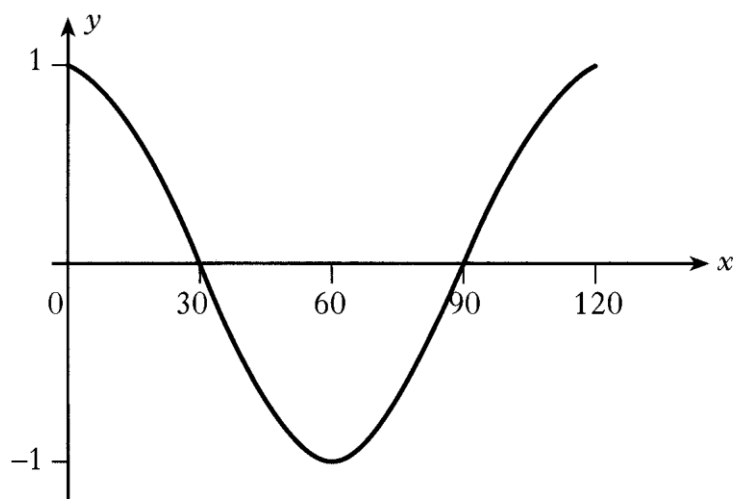
If $\cos 60^\circ = 0.5$, state two values for x for which $\cos x^\circ = -0.5$, $0 \leq x \leq 360$.

2

Ans

$120^\circ, 240^\circ$

Int 2 2001 P1 Q6



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

State the value of b .

1

Ans

$b = 3$