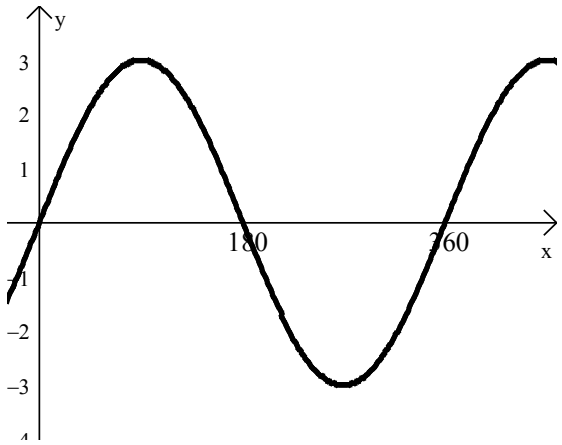
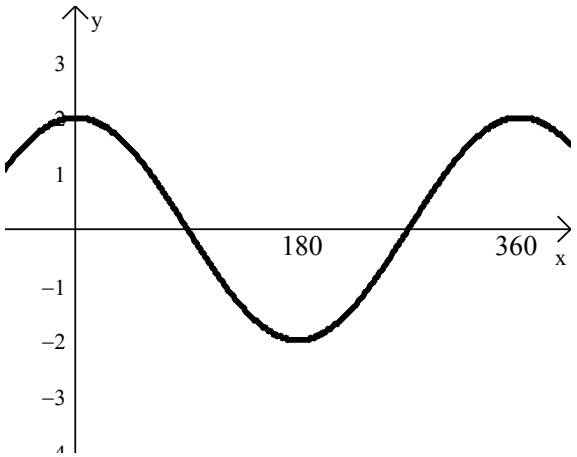
Trigonometric Graphs

1. Each of the graphs below has an equation of the form y = asin bx or y = acos bx. Write down the values of a and b.

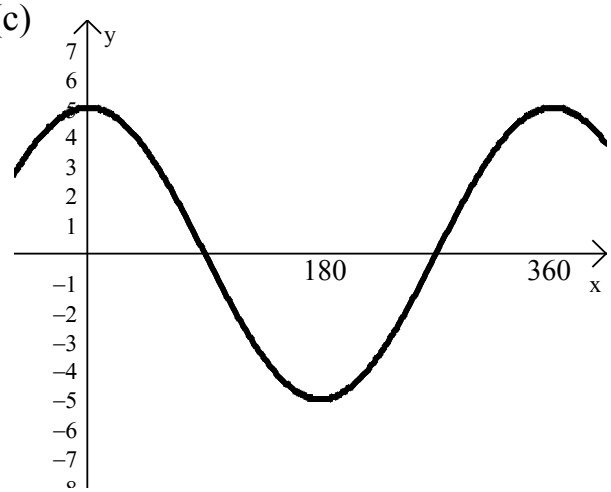
(a)



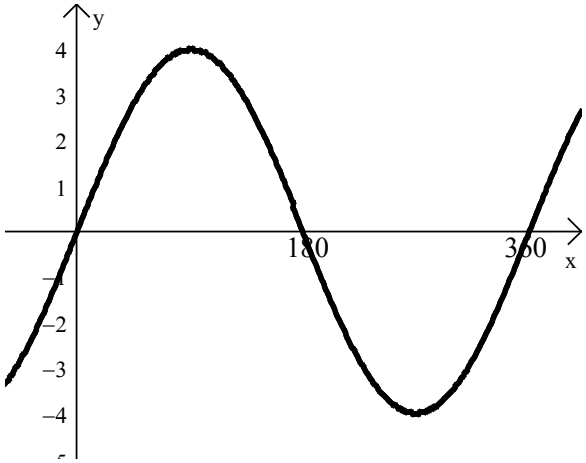
(b)



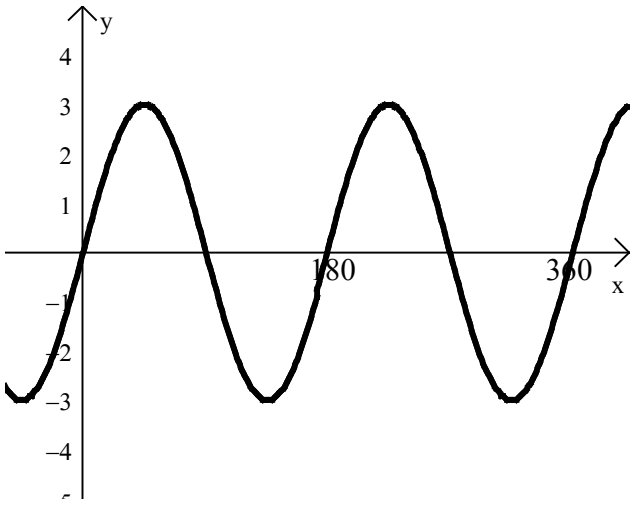
(c)



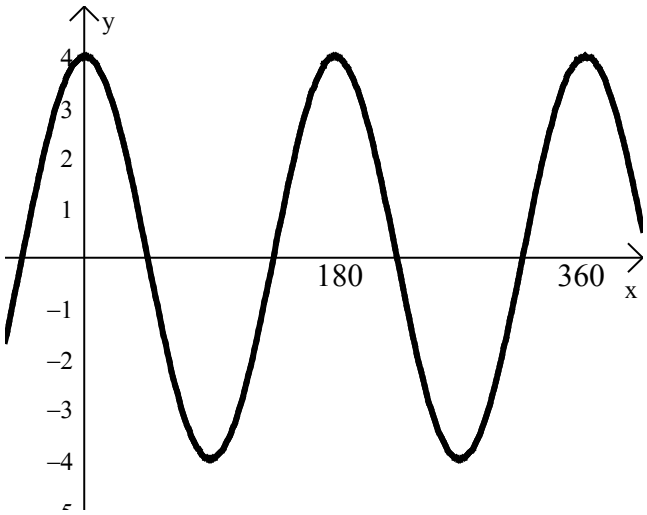
(d)



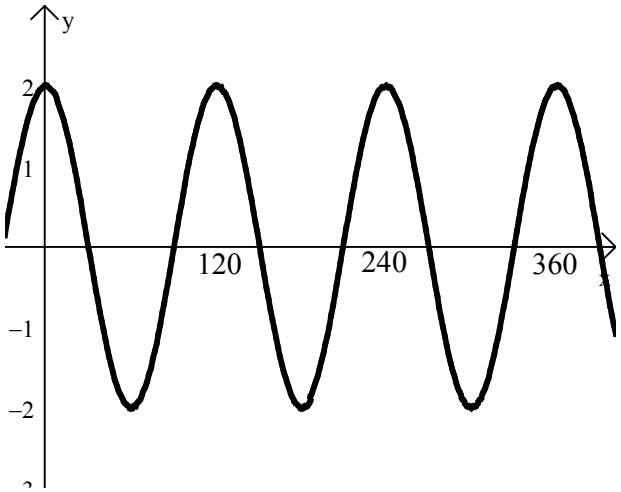
(e)



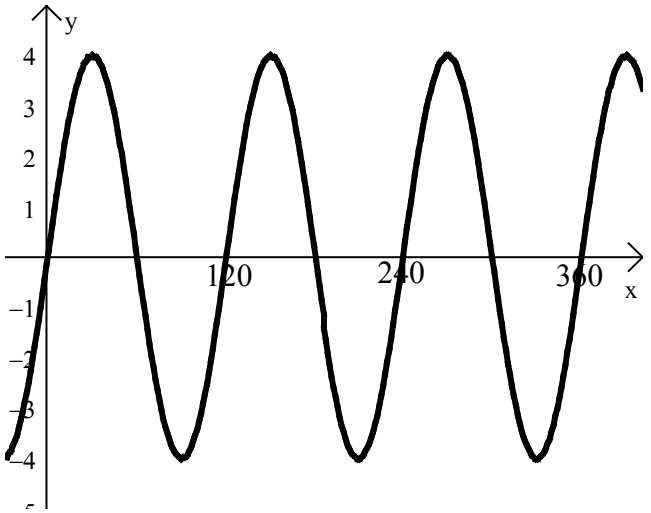
(f)



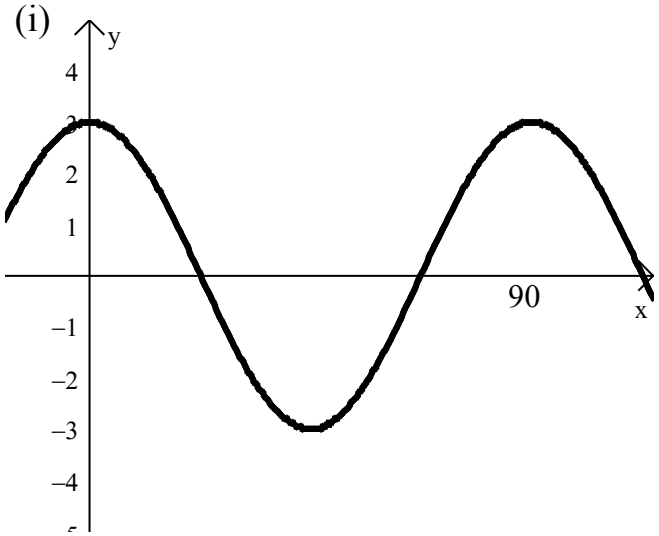
(g)


y
2
1
120
240
360
x
−1
−2

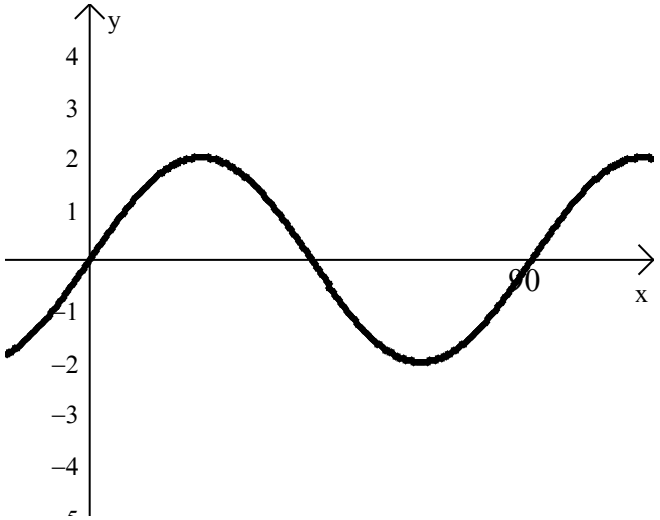
(h)


y
4
3
2
1
120
240
360
x
−1
−4

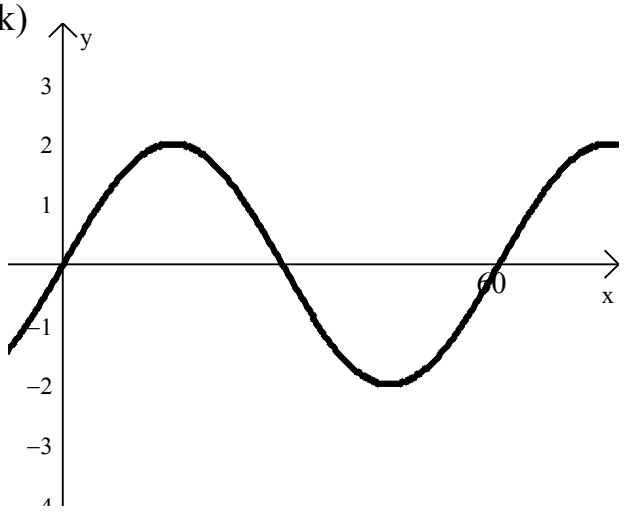
(i)


y
4
2
1
90
x
−1
−2
−3
−4

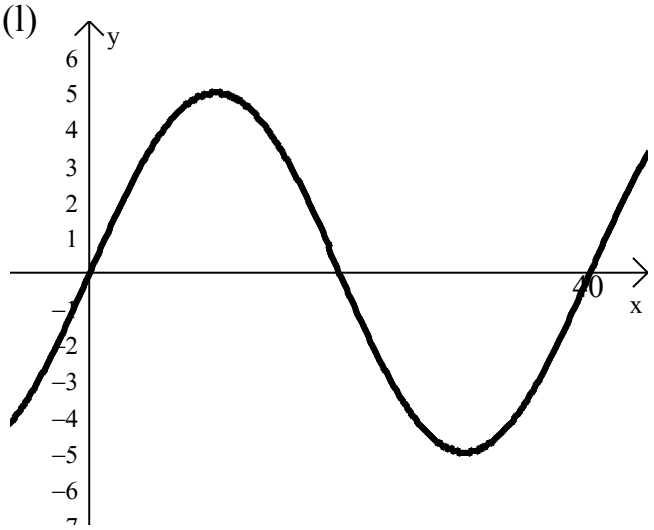
(j)


y
4
3
2
1
90
x
−1
−2
−3
−4

(k)

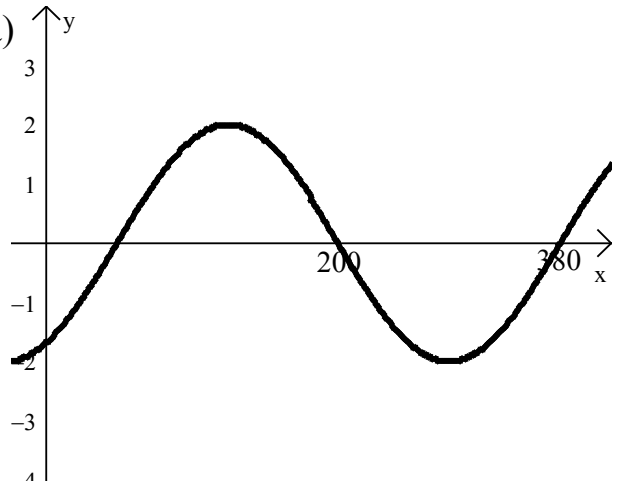

y
3
2
1
60
x
−1
−2
−3

(l)

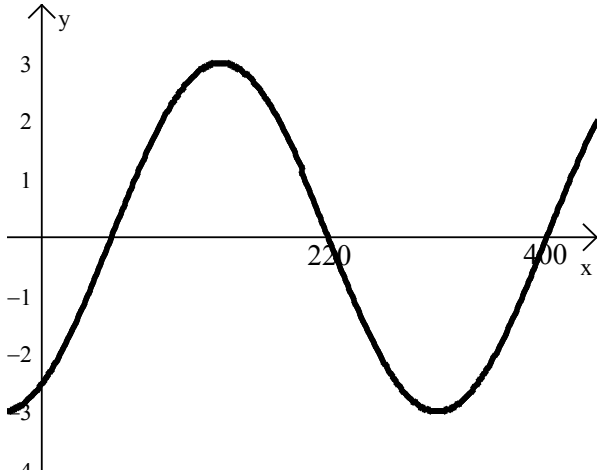

y
6
5
4
3
2
1
20
x
−2
−3
−4
−5
−6

2. Each graph below is of the form $y = a\sin(x \pm b)$.
Write down the equation of each graph.

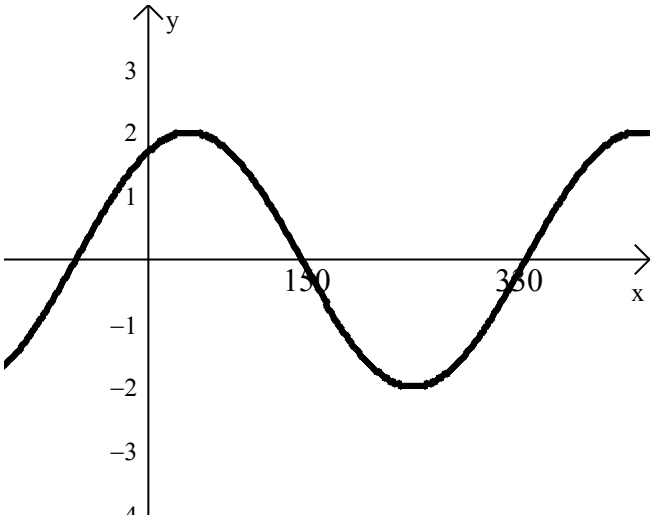
(a)



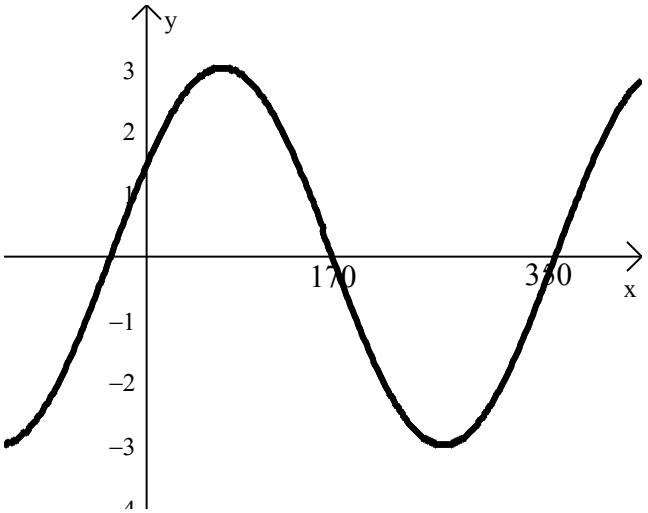
(b)



(c)

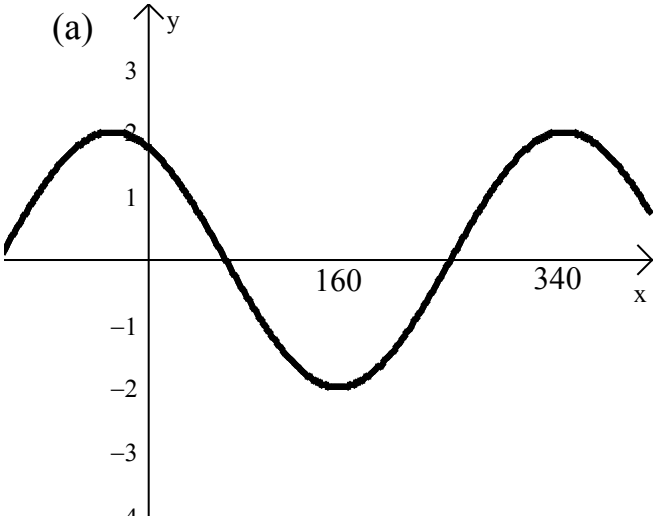


(d)

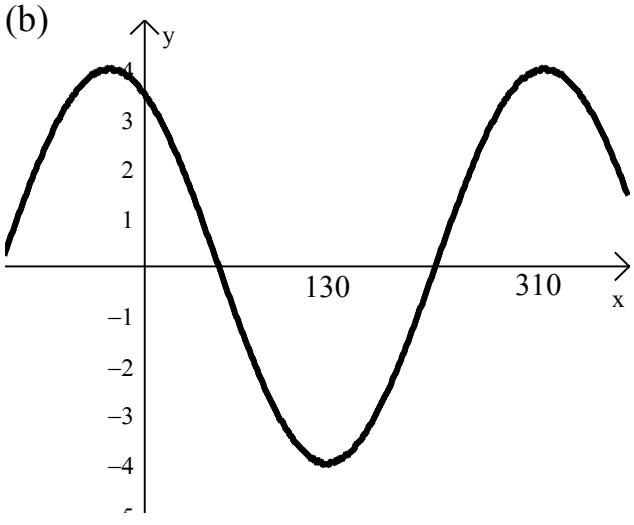


3. Each graph below is of the form $y = a\cos(x \pm b)$.
Write down the equation of each graph..

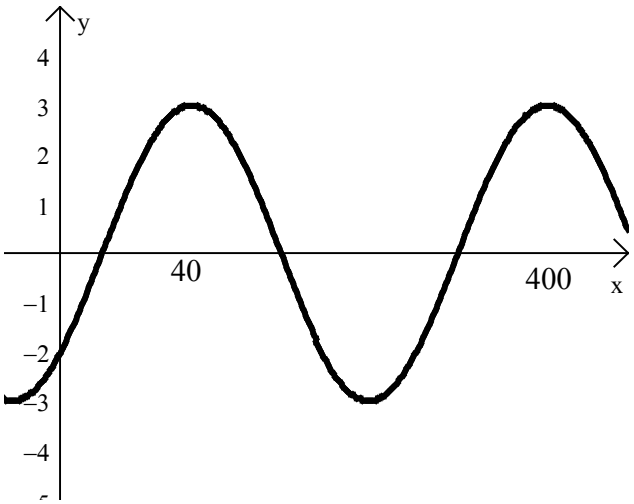
(a)



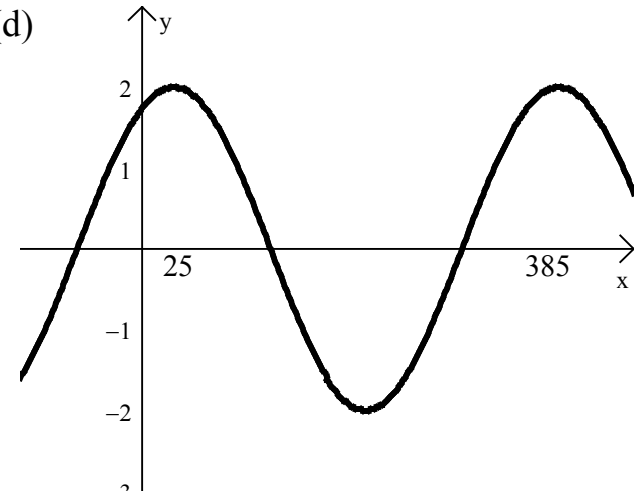
(b)



(c)



(d)



4. Make sketches of the following graphs for $0° \leq x° \leq 360°$

(a) $y = 6\sin x$ (b) $y = 4\cos x$ (c) $y = 3\sin 2x$

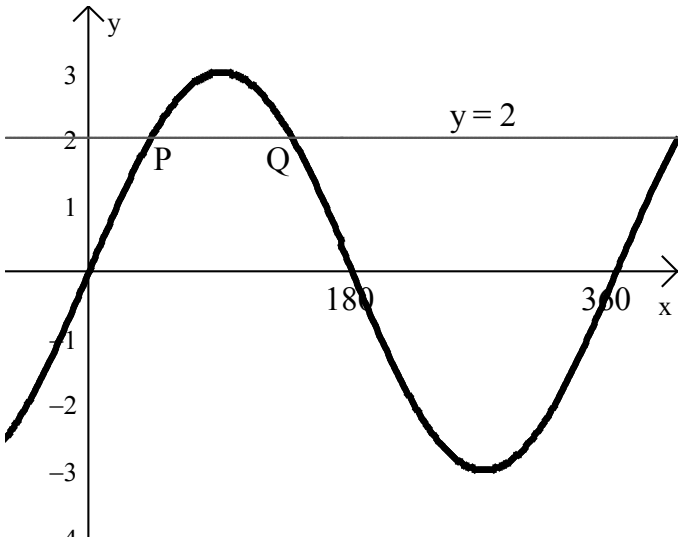
(d) $y = 4\sin 4x$ (e) $y = 2\cos 3x$ (f) $y = 8\cos 4x$

(g) $y = 2.5\cos 3x$ (h) $y = 1.2\sin 5x$ (i) $y = 4\cos(x - 45)$

(j) $y = 2\sin(x - 30)$ (k) $y = 5\cos(x + 20)$ (l) $y = 3\sin(x + 60)$

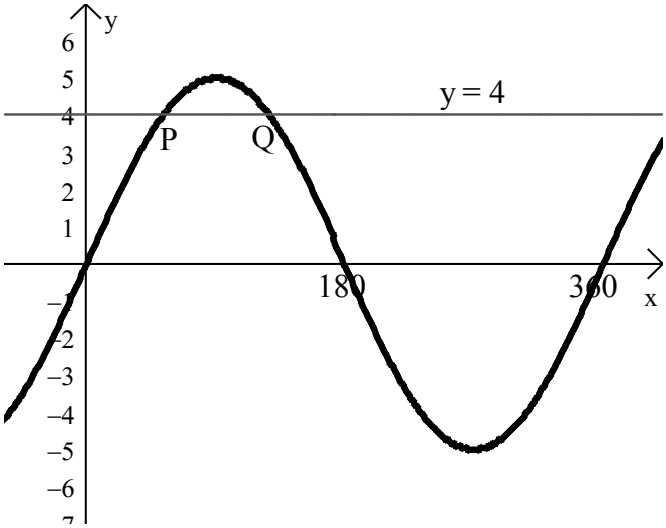
5. (a) Write down the equation of the graph opposite in the form $y = a\sin x$.

(b) The line $y = 2$ meets this graph at the points P and Q. Find the coordinates of P and Q.



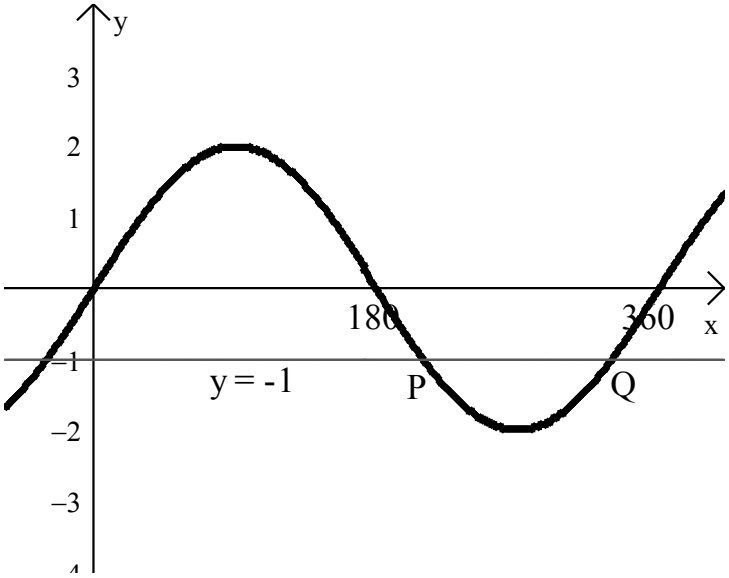
6. (a) Write down the equation of the graph opposite in the form $y = a\sin x$.

(b) The line $y = 4$ meets this graph at the points P and Q. Find the coordinates of P and Q.



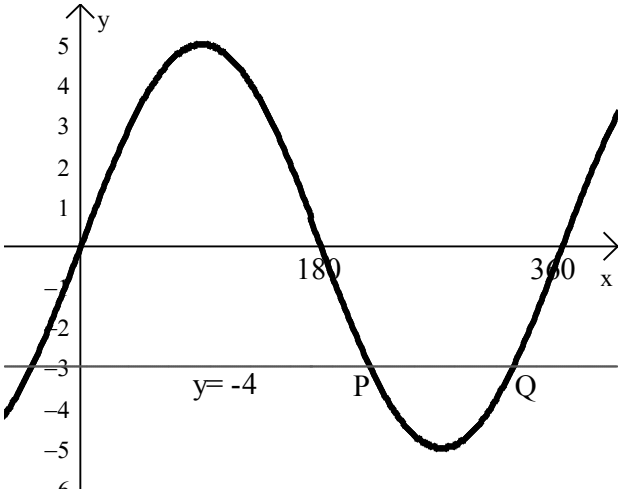
7. (a) Write down the equation of the graph opposite in the form $y = a\sin x$.

(b) The line $y = -1$ meets this graph at the points P and Q. Find the coordinates of P and Q.



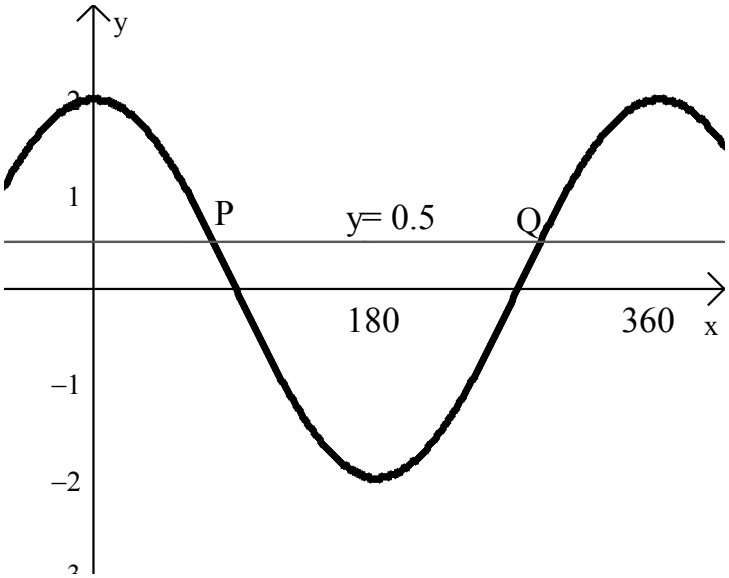
8. . (a) Write down the equation of the graph opposite in the form $y = a\sin x$.

(b) The line $y = -4$ meets this graph at the points P and Q. Find the coordinates of P and Q.



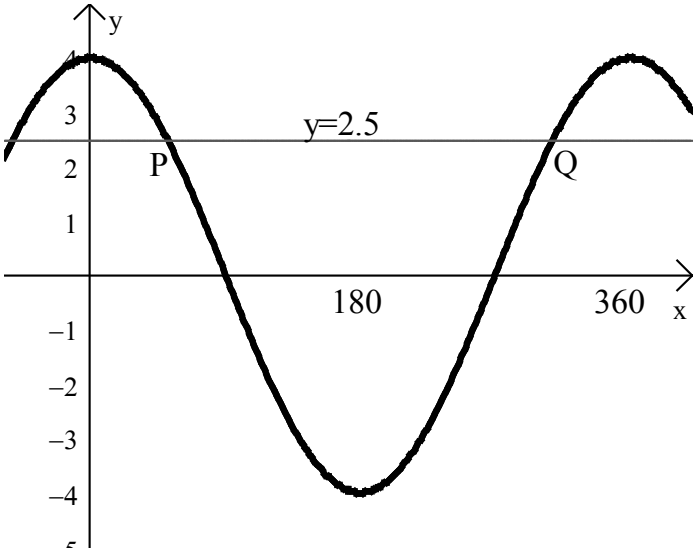
9. . (a) Write down the equation of the graph opposite in the form $y = a\cos x$.

(b) The line $y = 0.5$ meets this graph at the points P and Q. Find the coordinates of P and Q.



10. (a) Write down the equation of the graph opposite in the form $y = a\cos x$.

(b) The line $y = 2.5$ meets this graph at the points P and Q. Find the coordinates of P and Q.



11. (a) Write down the equation of the graph opposite in the form $y = a\cos x$.

(b) The line $y = -3.5$ meets this graph at the points P and Q. Find the coordinates of P and Q.