

GRAPHS OF FUNCTIONS SOLUTIONS

① $a=4, b=2, c=1$

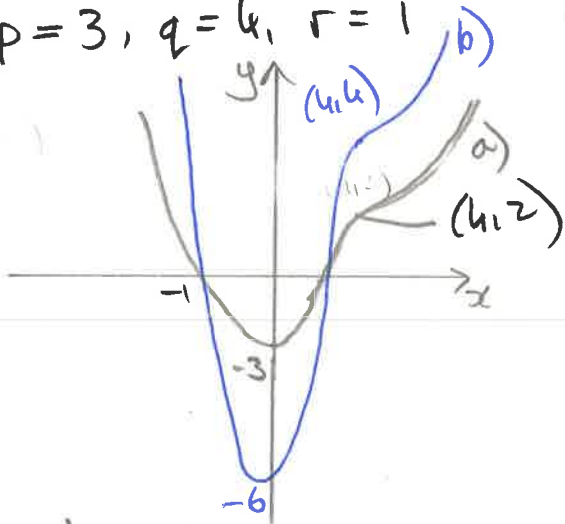
② $a=2, b=3, c=-1$

③ $y = 2 \cos 3x$

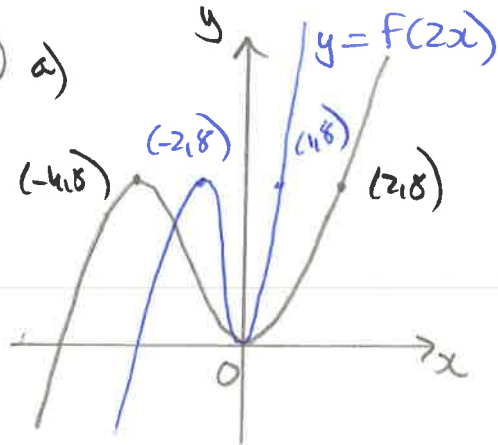
④ $y = \cos(x - \frac{\pi}{6}) - 1$

⑤ $p=3, q=4, r=1$

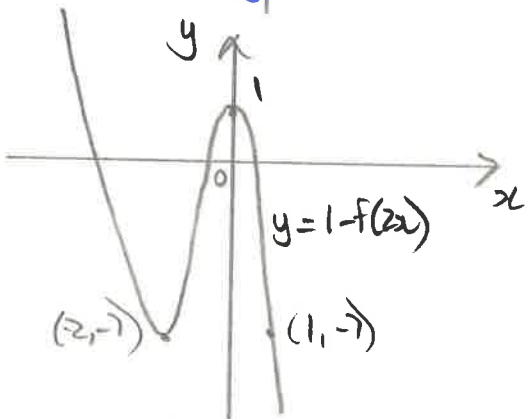
⑥



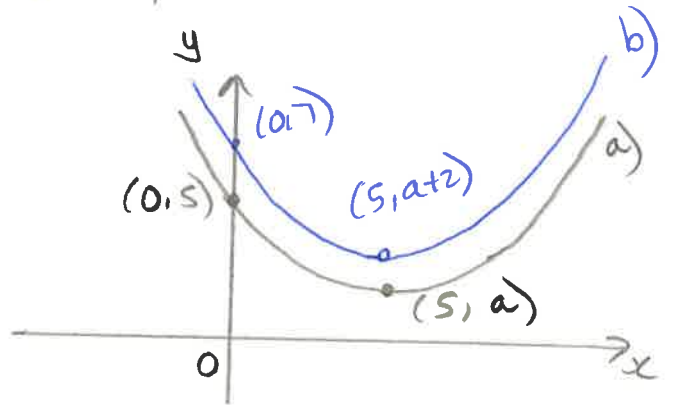
⑦ a)



b)

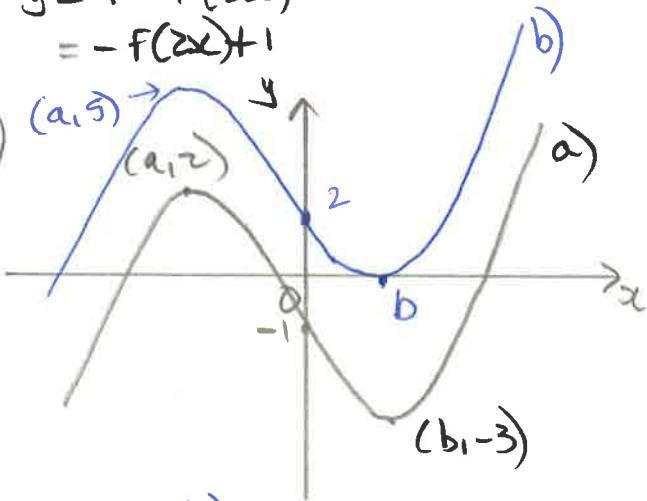


⑧

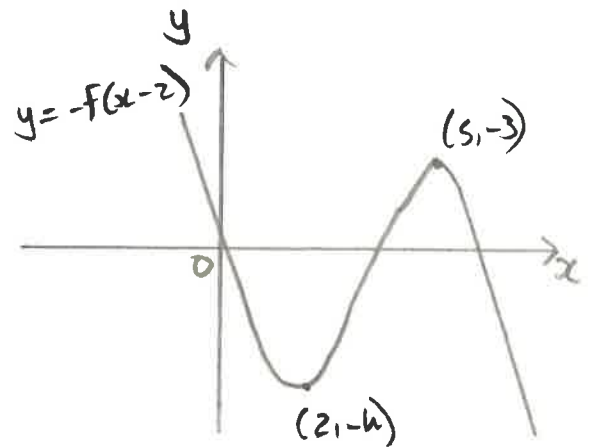


$y = 1 - F(2x)$
 $= -F(2x) + 1$

⑨

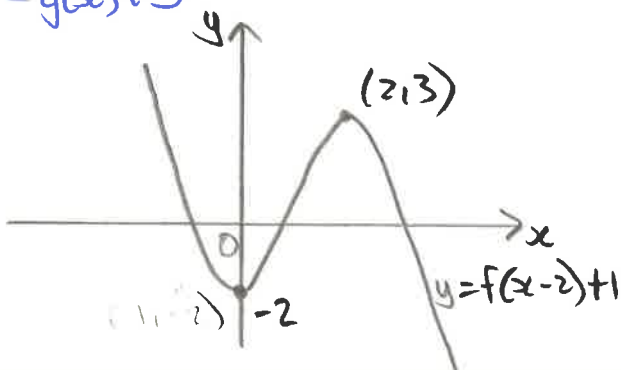


⑩



$y = 3 - g(x)$
 $= -g(x) + 3$

⑪



⑫ $F(2x) - 3$: halved x -coord.
 $= -3$ from y -coord.
 $\therefore (6, 4)$ $\frac{12}{2}$ was halved
 $\frac{7}{1}$ was reduced by 3
 $\therefore (12, 7)$.

