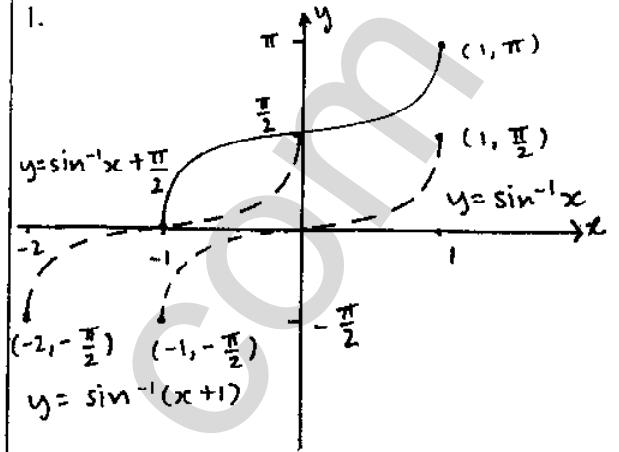
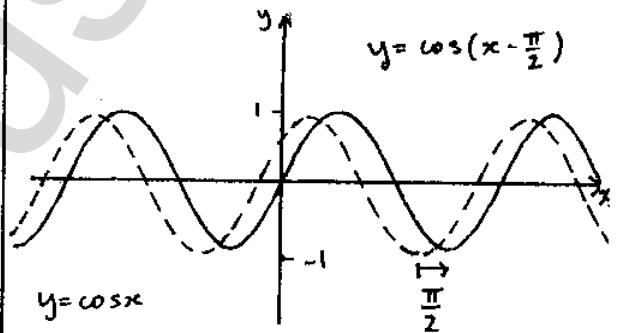


EXERCISE: 1.3

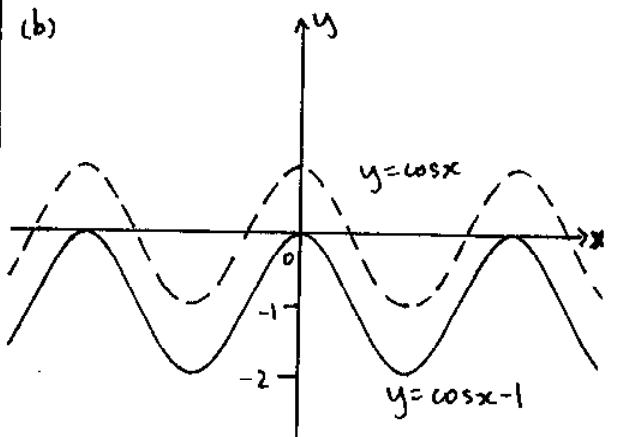
1.

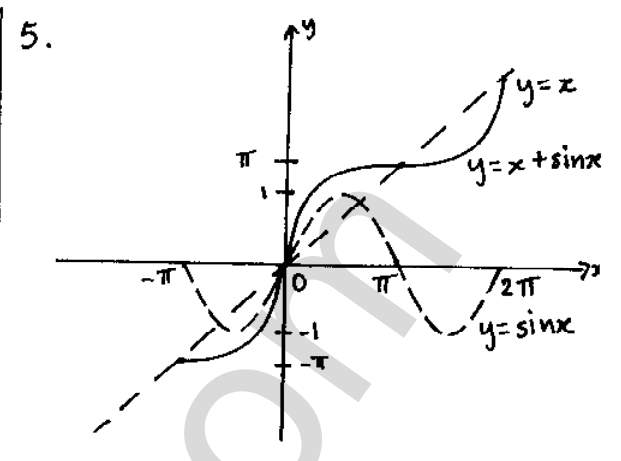
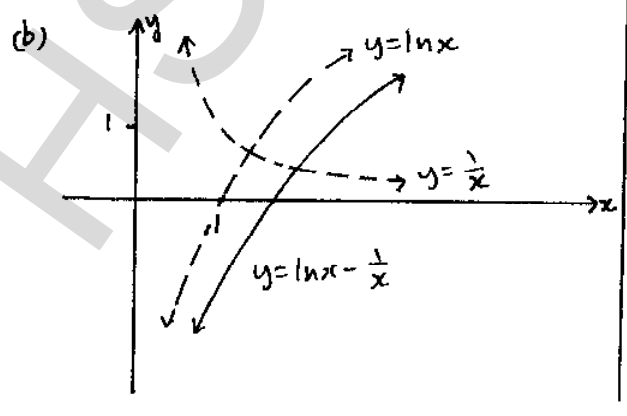
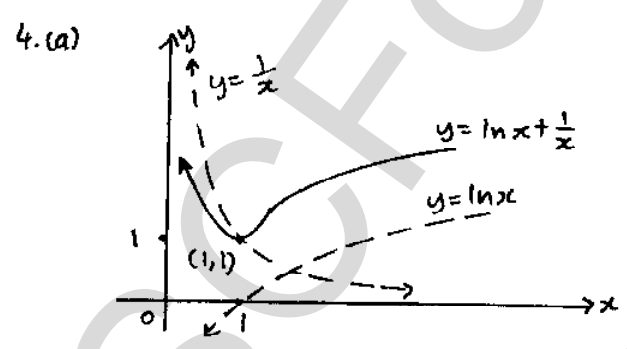
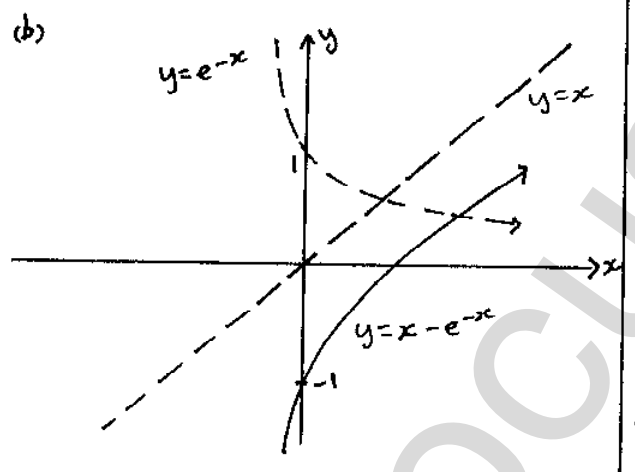
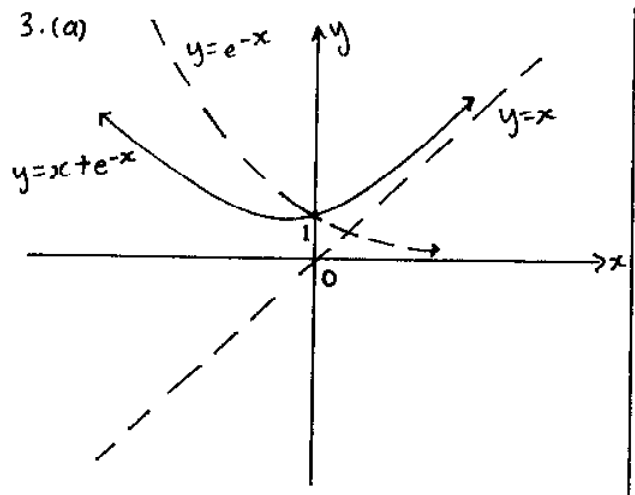


2. (a)



(b)





Yes, it is an odd function because it is symmetrical about the origin. However, we can do it mathematically:
 $f(x) = x + \sin x$
 $\therefore f(-x) = -x + \sin(-x) = -x - \sin x$
 $\therefore f(-x) = -f(x)$
 $\therefore f(x)$ is an odd function.

6. As $f(x) = g(x) + h(x)$
 $\therefore f(-x) = g(-x) + h(-x)$
 but $g(x) = g(-x)$ [$g(x)$ is an even function]
 $h(x) = h(-x)$ [$h(x)$ is an even function]
 $\therefore f(-x) = g(x) + h(x)$
 $\therefore f(x) = f(-x)$
 $\therefore f(x)$ is an even function.