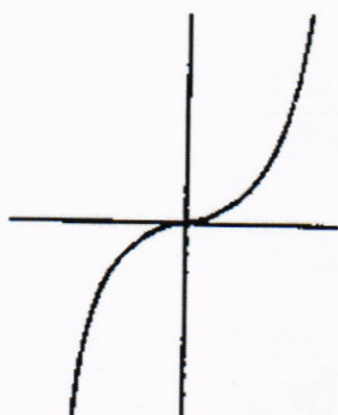
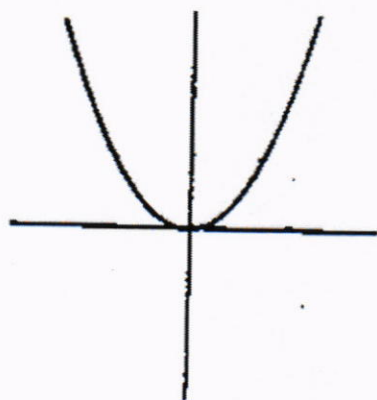


(3) if f is both one-to-one and onto, i.e. invertible, then each horizontal line will intersect the graph of f at exactly one point.



$$f_4(x) = x^3$$

$f(x)$ NOT (ONE-TO-ONE) & NOT (ONTO)



$$f_1(x) = x^2$$