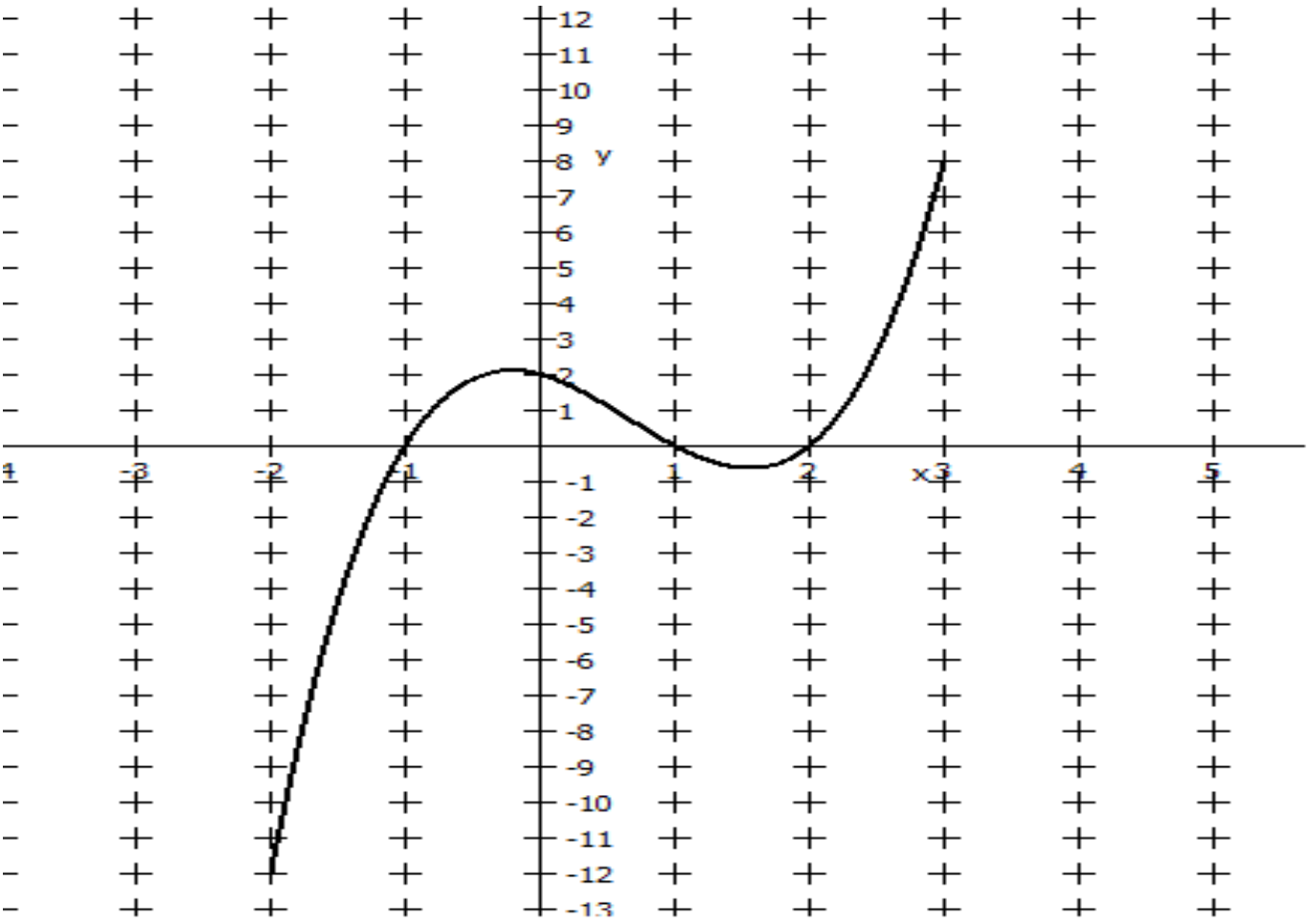
Objective 28: understanding more on graph

Ex. Suppose that f is a function given below and answer the following questions.



(a) Find the domain and the range of the function y=f(x) and intercepts if they exist.

Domain: [-2,3], Range: [-12,8] x-intercepts: (-1,0), (1,0), (2,0) y-intercept: (0,2)

(b) Find the value of $f(-3)$, $f(-2)$, $f(0)$ and $f(2)$.

$f(-3)$ = none, $f(-2)$ = -8, $f(0)$ =2, $f(2)$ =0

(c) Find the x-value(s) such that $f(x)=5$. approximately 2.7

(d) Find the x-value(s) such that $f(x)=-4$. approximately -2.5

(e) Find the interval such that the function $y=f(x)$ is increasing. [-2,-0.7], [1.5,3]

(f) Find the interval such that the function $y=f(x)$ is decreasing. (--.7,2.6)

(g) The function g is defined by $g(x)=f(x-1)-2$. Describe how the graph of g is obtained from the graph of f and sketch the graph of g(x) to the above. Horizontal shift 1 unit to the right, shift down 2 units