2.1.28: $x+y^2=1$ is not a function since $x=0$ gives us $y^2=1$ means $y=1$ or -1. But this is impossible //

2.1.44: $f(x)=\dfrac{x}{\sqrt{x-4}}$ $\Rightarrow$ Domain = all numbers satisfying $x-4>0$

$= x>4$

$=(4,\infty)$ //

2.1.48: (a) $f(0)=0$, $f(6)=0$ (b) $f(2)=-2$, $f(-2)=1$ (c) $f(3)<0$
(d) $f(-1)>0$ (e) $f(x)=0$ if $x=0,4,6$ (f) $f(x)<0$ if $\boxed{0<x<4}$
(g) Domain $=[-4,6]$ (h) Range $=[-2,3]$ (i) x-int: $x=0,4,6$
(j) $(0,0)$ (k) twice (l) once (m) $f(x)=3$ if $x=5$ (n) $f(x)=-2$ if $x=2$

3.1.30: $y=x^4-1$

x-axis: $-y=x^4-1$ NO

y-axis: $y=(-x)^4-1=x^4-1$ YES

origin: $-y=(-x)^4-1=x^4-1$ NO

3.1.34: $y=\dfrac{x^2-4}{x}$

x-axis: $-y=\dfrac{x^2-4}{x}$ NO

y-axis: $y=\dfrac{(-x)^2-4}{-x}=-\dfrac{x^2-4}{x}$ NO

origin: $-y=\dfrac{(-x)^2-4}{-x} \Rightarrow y=\dfrac{x^2-4}{x}$ YE

3.2.10: $(-8,-4)$, $(0,0)$, $(5,0)$ coordinates for local minimum
$x=-8,0,5$ and local minima is $-4,0,0$ respectively.

3.2.22: a) $(-3,3)$, $(3,3)$, $(0,2)$
b) $(-1,0)$, $(1,0)$

3.2.52: increasing at $\overbrace{(-1,0)\cup(2,3)}^{\text{interval}}$ / decreasing at $\overbrace{(0,2)}^{\text{interval}}$
local max at $\underbrace{(0,5)}_{\text{coordinates}}$, local min at $\underbrace{(2,1)}_{\text{coordinates}}$