

Section 2.1

$$34. \quad f(x) = \begin{cases} 3x & \text{if } x < 0 \\ x+1 & \text{if } 0 \leq x \leq 2 \\ (x-2)^2 & \text{if } x > 2 \end{cases}$$

$$f(-5) = -15$$

$$f(2) = 3$$

$$f(0) = 1$$

$$f(5) = 9$$

$$f(1) = 2$$

$$38. \quad f(x) = 6x - 18$$

$$f\left(\frac{x}{3}\right) = 6 \frac{x}{3} - 18 = \boxed{2x - 18}$$

$$\frac{f(x)}{3} = \frac{6x - 18}{3} = \frac{6x}{3} - \frac{18}{3} = \boxed{2x - 6}$$

$$70. \quad f(x) = \frac{x^2}{\sqrt{6-x}}$$

To be defined we need $6-x > 0$
 $x < 6$

