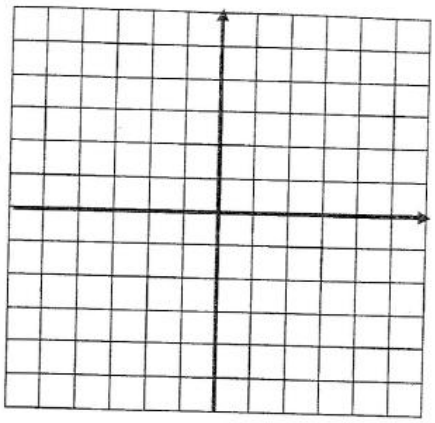
Piecewise Functions

49. Suppose $f(x)=\begin{cases} x-1, \text{ if } x<2 \\ \sqrt{x-1}, \text{ if } x>2 \end{cases}$. Answer the following:

a) Calculate $f(-3)$ _____ b) Calculate $f(2)$ _____

c) Calculate $f(10)$ _____ d) Graph $f(x)$ →



Domain _____

Range _____

50. $f(x)=x^2-3$

a. $f(7)=$ _____ b. $f(-5)=$ _____

c. $f(x+1)=$ _____

51.

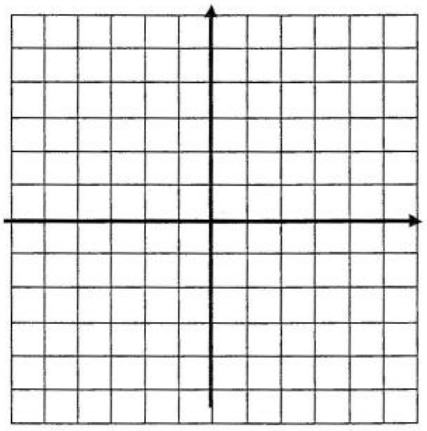
Functions: *Find the domain and range of the following.*

*Note: domain restrictions - denominator $\neq 0$, argument of a log or ln > 0,
radicand of even index must be ≥ 0
range restrictions - reasoning, if all else fails, use graphing calculator

a) $y=\frac{3}{x-2}$ _____ b) $y=\log(x-3)$ _____ c) $y=x^4+x^2+2$ _____

d) $y=\sqrt{2x-3}$ _____ e) $y=|x-5|$ _____ f) domain only: $y=\frac{\sqrt{x+1}}{x^2-1}$ _____

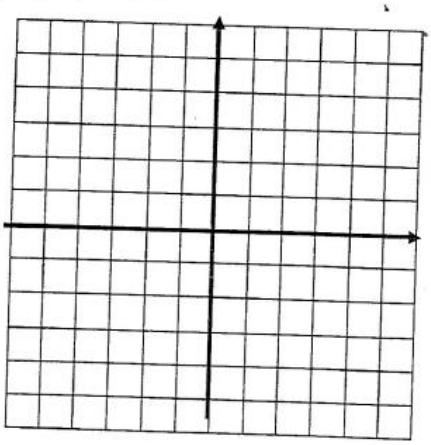
52. y = ln x



Domain _____

Range _____

53. y = |x + 3| - 2



Domain _____

Range _____

Graph each function. Give its domain and range.