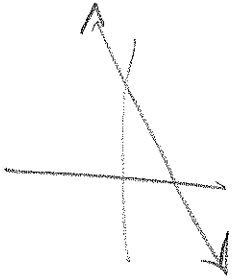


121 § 2.2 #s 49-55 odd, 69, 71, 73

#s 49-56 state  $\mathcal{D}, \mathcal{R}$ , ints of  $\omega$  (dec/const).

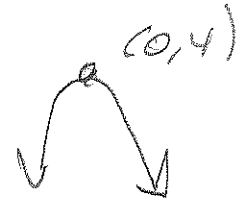
49



$$\mathcal{D} = \mathbb{R}$$

$$\mathcal{R} = \mathbb{R}$$

$$\text{Dec} : (-\infty, \infty) = \mathbb{R}$$



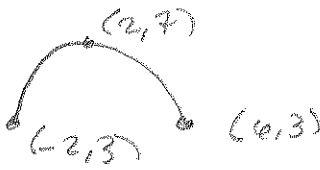
$$\mathcal{D} = \mathbb{R}$$

$$\mathcal{R} = (-\infty, 4]$$

$$\text{Inc} : (-\infty, 0]$$

$$\text{Dec} : (0, \infty)$$

51



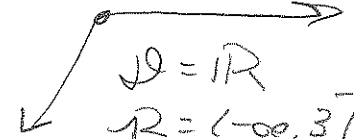
$$\mathcal{D} = [-2, 6]$$

$$\mathcal{R} = [3, 7]$$

$$\text{Inc} : [-2, 3]$$

$$\text{Dec} : [3, 6]$$

$x = -2, 3$



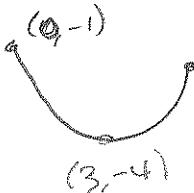
$$\mathcal{D} = \mathbb{R}$$

$$\mathcal{R} = (-\infty, 3]$$

$$\text{Inc} : (-\infty, 3]$$

$$\text{Const} : [3, \infty)$$

53



$$\mathcal{D} = [0, 6]$$

$$\mathcal{R} = [-4, -1]$$

$$\text{Inc} : [3, 6]$$

$$\text{Dec} : [0, 3]$$

$x = -2/3, 7/3$

$(-2, 0)$

$$\mathcal{D} = \mathbb{R}$$

$$\mathcal{R} = \mathbb{R}$$

$$\text{Inc} : [-2, 2/3]$$

$$\text{Dec} : (-\infty, -2]$$

$$\cup [-2/3, \infty)$$

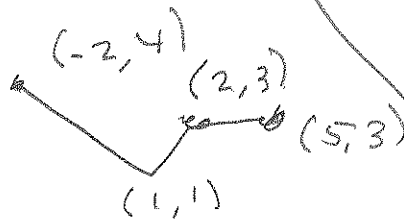
55



$$\mathcal{D} = \mathbb{R}$$

$$\mathcal{R} = \mathbb{R}$$

$$\text{Inc} : \mathbb{R}$$



$$\mathcal{D} = [-2, 5]$$

$$\mathcal{R} = [1, 4]$$

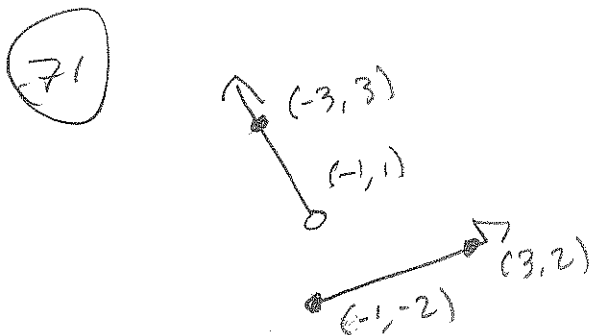
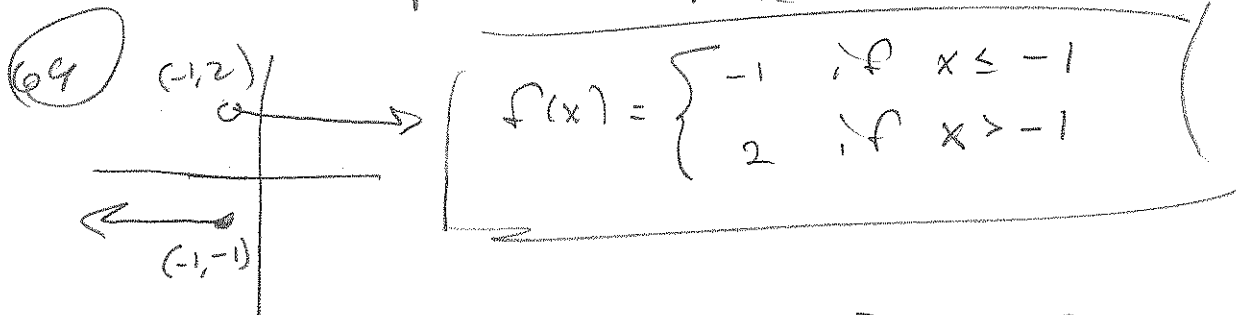
$$\text{Inc} : [1, 2]$$

$$\text{Dec} : [-2, 1]$$

$$\text{const} : [2, 5]$$

121  $\int 2,2 \neq 569,71,73$

#569-74 write piecewise func.



$$m_1 = \frac{1-3}{-1-(-3)} = \frac{-2}{2} = -1$$

$$y = m(x - x_1) + y_1$$

$$y = -1(x - (-1)) + 1$$

$$m_2 = \frac{2 - (-2)}{3 - (-1)} = \frac{4}{4} = 1$$

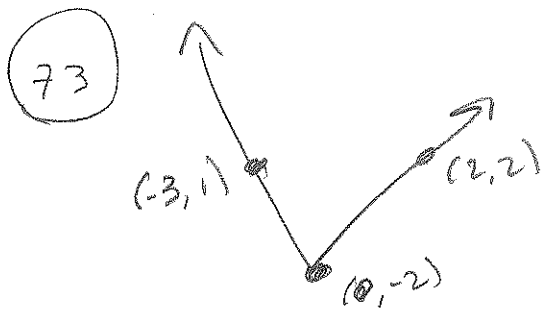
$$f(x) = \begin{cases} -(x+1) + 1 & \text{if } x < -1 \\ (x-3) + 2 & \text{if } x \geq -1 \end{cases}$$

$$m_1 = \frac{-2-1}{0-(-3)} = \frac{-3}{3} = -1$$

$$y = -x - 2$$

$$m_2 = \frac{2 - (-2)}{2 - 0} = \frac{4}{2} = 2$$

$$y = 2x - 2$$



$$f(x) = \begin{cases} -x - 2 & \text{if } x < 0 \\ 2x - 2 & \text{if } x \geq 0 \end{cases}$$

Answers may vary slightly wrt  $\leq, >$ .