

$$35) F(x) = \frac{x}{\sqrt{x^2+7}}$$

$$x = \frac{y}{\sqrt{y^2+7}}$$

$$(x\sqrt{y^2+7})^2 = (y)^2$$

$$x^2(y^2+7) = y^2$$

$$x^2y^2 + 7x^2 = y^2$$

$$7x^2 = y^2 - x^2y^2$$

$$7x^2 = y^2(1-x^2)$$

$$\sqrt{y^2} = \sqrt{\frac{7x^2}{1-x^2}}$$

$$|y| = \sqrt{\frac{7x^2}{1-x^2}}$$

$$y = \pm \sqrt{\frac{7x^2}{1-x^2}}$$

$$39) y = 1.25x + 1.6(50-x) \quad D: [0, 50]$$

$$y = 1.25x + 80 - 1.6x$$

$$R: [62.5, 80]$$

$$y = -.35x + 80$$

$$\text{mv: } x = -.35y + 80$$

$$x - 80 = -.35y$$

$$\frac{x-80}{-.35} = y \quad \text{range: } [0, 50]$$

$$\text{domain } [62.5, 80]$$

$$d: \quad 20 \text{ lbs}$$

$$45) F(x) = \ln(x-3) \quad d: x > 3$$

$$F'(x) = \frac{1}{x-3} \quad \text{no max, monotonic or min}$$

$$x = \ln(y-3)$$

$$e^x = y-3$$

$$e^x + 3 = y$$