

Inverse Hw

31) $f(x) = 2x + 1$
 $y = 2x + 1$
 $x = 2y + 1$
 $y = \frac{x-1}{2}$

37) $f(x) = \frac{1}{x+2}$
 $y = \frac{1}{x+2}$

$x = \frac{1}{y+2}$
 $xy + 2x = 1$
 $xy = 1 - 2x$
 $y = \frac{1-2x}{x}$

43) $f(x) = 4 - x^2 \quad x \geq 0$
 $y = 4 - x^2 \quad x \geq 0$
 $x = 4 - y^2 \quad y \geq 0$
 $y = \sqrt{4-x} \quad y \geq 0$

33) $f(x) = 4x + 7$
 $y = 4x + 7$
 $x = 4y + 7$
 $y = \frac{x-7}{4}$

39) $f(x) = \frac{1+3x}{5-2x}$
 $x = \frac{1+3y}{5-2y}$

$x(5-2y) = 1+3y$
 $5x - 2xy = 1+3y$
 $3y + 2xy = 1 - 5x$
 $y(3+2x) = 1 - 5x$
 $y = \frac{1-5x}{3+2x}$

45) $y = 4 + 3\sqrt{x}$
 $x = 4 + 3\sqrt{y}$
 $y = (x-4)^3$

35) $f(x) = \frac{x}{2}$
 $y = \frac{x}{2}$
 $x = 2y$
 $y = 2x$

41) $y = \sqrt{2+5x}$
 $x = \sqrt{2+5y}$
 $x^2 = 2+5y$
 $y = \frac{x^2-2}{5} \quad x \geq 0$

47) $y = 1 + \sqrt{1+x}$
 $x = 1 + \sqrt{1+y}$
 $\sqrt{1+y} = x-1$
 $1+y = (x-1)^2$
 $y = (x-1)^2 - 1 \quad x \geq 1$
 $x^2 = 2x$

49) $f(x) = x^4$
 $y = x^4$
 $x = y^{\frac{1}{4}}$
 $y = \sqrt[4]{x} \quad y \geq 0$