

$$32. \sqrt{2x-1}$$

$$2x-1 \geq 0$$

$$\frac{2x}{2} \geq \frac{1}{2}$$

$$D: x \geq \frac{1}{2}$$

$$31. g(x) = \frac{2}{x^2+3}$$

$$D: \mathbb{R}$$

$$33. \frac{1}{x^2+5x+6}$$

$$\frac{1}{(x+3)(x+2)}$$

$$D: x \neq -3, -2$$

HW Assessment

$$34. G(x) = \frac{2}{(x-1)(x+2)}$$

Find domain

Nested Functions

$$f(x) = |x - 7| \quad g(x) = x^2 + 5$$

$$h(x) = 4x - 8$$

$$f(h(5)) \quad h(5) = 20 - 8 = 12$$

$$f(12) = |12 - 7| = \boxed{5}$$

$$h(f(5)) \quad f(5) = |5 - 7| = |-2| = 2$$

$$h(2) = 4(2) - 8 = 8 - 8 = \boxed{0}$$

$$f(g(1)) \quad g(1) = 1^2 + 5 = 6$$

$$f(6) = |6 - 7| = |-1| = \boxed{1}$$

$$f(-2) = |-2 - 7| = |-9| = 9$$

$$g(-2) = 9$$

$$g(h(22)) \quad h(22) = 4(22) - 8$$

$$88 - 8 = 80$$

$$g(80) = 80^2 + 5 = 6400 + 5 = \boxed{6405}$$

your turn!

$$f(x) = |x - 7| \quad g(x) = x^2 + 5$$

$$h(x) = 4x - 8$$

$$g(f(-2))$$

$$h(g(-3))$$