

## ***Intermediate Algebra Skill***

### ***Finding the Domain: Given the Equation; Rational Function and Nonlinear Denominator***

Find the Domain.

$$1) F(x) = \frac{x}{x^2 - 36}$$

$$2) G(x) = \frac{x - 5}{x^2 + 5x + 6}$$

$$3) f(x) = \frac{1}{4 - x^2}$$

$$4) g(x) = \frac{2x}{3x^2 + 5x + 2}$$

$$5) H(x) = \frac{2x + 5}{x^2 - x}$$

$$6) h(x) = \frac{1 - x}{2x - x^2}$$

$$7) J(x) = \frac{2x^2 + 7x - 2}{x^2 - 25}$$

$$8) j(x) = \frac{5x^2 + 1}{x^2 + 5}$$

$$9) K(x) = \frac{x - 1}{x^3 - x}$$

$$10) k(x) = \frac{7x^2 - x + 2}{x^2 + 4}$$

**Answers to Finding the Domain: Given the Equation; Rational Function and Nonlinear Denominator**

1)  $\mathbb{R} \setminus \{-6, 6\}$

2)  $\mathbb{R} \setminus \{-3, -2\}$

3)  $\mathbb{R} \setminus \{-2, 2\}$

4)  $\mathbb{R} \setminus \{-2/3, -1\}$

5)  $\mathbb{R} \setminus \{0, 1\}$

6)  $\mathbb{R} \setminus \{0, 2\}$

7)  $\mathbb{R} \setminus \{-5, 5\}$

8)  $\mathbb{R}$

9)  $\mathbb{R} \setminus \{-1, 0, 1\}$

10)  $\mathbb{R}$