

## ***Intermediate Algebra Skill***

### **Finding the Domain: Given the Equation; Even-indexed Radical Function and Quadratic Radicand**

Find the Domain.

1)  $F(x) = \sqrt{x^2 - 9}$

2)  $G(x) = x\sqrt{1 - x^2}$

3)  $f(x) = \sqrt{x^2 + 2x - 3}$

4)  $g(x) = x\sqrt{2x^2 - x - 1}$

5)  $H(x) = \sqrt{x^2 + 5x + 6}$

6)  $h(x) = 5\sqrt{x^2 - 36}$

7)  $J(x) = \sqrt{16 - x^2}$

8)  $j(x) = x\sqrt{2x - x^2}$

9)  $K(x) = \sqrt{x^2 + 4x - 12}$

10)  $k(x) = 9\sqrt{x^2 - x - 6}$

**Answers to Finding the Domain: Given the Equation; Even-indexed Radical Function and Quadratic Radicand**

1)  $(-\infty, -3] \cup [3, \infty)$

2)  $[-1, 1]$

3)  $(-\infty, -3] \cup [1, \infty)$

4)  $(-\infty, -\frac{1}{2}] \cup [1, \infty)$

5)  $(-\infty, -2] \cup [-3, \infty)$

6)  $(-\infty, -6] \cup [6, \infty)$

7)  $[-4, 4]$

8)  $[0, 2]$

9)  $(-\infty, -6] \cup [2, \infty)$

10)  $(-\infty, -2] \cup [3, \infty)$