

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

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