***Intermediate Algebra Skill***

***<u>Finding the Domain: Given the Equation; Even-indexed Radical Function and Simple Rational Radicand</u>***

Find the Domain.

1) $F(x)=\sqrt{\frac{x+2}{3-x}}$

2) $G(x)=\sqrt{\frac{1}{x-4}}$

3) $f(x)=\sqrt{\frac{5}{2x-6}}$

4) $g(x)=\sqrt{\frac{x}{x+2}}$

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

6) $h(x)=\sqrt{\frac{x-2}{x+4}}$

7) $J(x)=\sqrt{\frac{x+2}{x-4}}$

8) $j(x)=\sqrt{\frac{2x+1}{3x-1}}$

9) $K(x)=\sqrt{\frac{x^2-x-6}{x+1}}$

10) $k(x)=\sqrt{\frac{1-x^2}{2-x}}$

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

1) $[-2,3)$

2) $(4,\infty)$

3) $(3,\infty)$

4) $(-\infty,-2)\cup[0,\infty)$

5) $(-\infty,0]\cup(2,\infty)$

6) $(-\infty,-4)\cup[2,\infty)$

7) $(-\infty,-2]\cup(4,\infty)$

8) $\left(-\infty,-\frac{1}{2}\right]\cup\left(\frac{1}{3},\infty\right)$

9) $[-2,-1)\cup[3,\infty)$

10) $[-1,1]\cup(2,\infty)$