

$$x^2 > 3(x+6)$$

$$x^2 > 3x + 18$$

$$x^2 - 3x - 18 > 0$$

$$(x-6)(x+3) > 0 \text{ set equal to zero}$$

$x=6$ $x=-3$

$(-5-6)(-5+3) > 0$ $(0-6)(0+3) > 0$ $(10-6)(10+3) > 0$
 $(-11)(-2) > 0$ $(-6)(3) > 0$ $(4)(13) > 0$
 $22 > 0$ $-18 > 0$ $52 > 0$

$$(-\infty, -3) \cup (6, \infty)$$

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$$\frac{1+x}{1-x} \geq 1$$

$$\frac{1+x}{1-x} - 1 \geq 0$$

combine

$$\frac{1+x - (1-x)}{1-x} \geq 0$$

$$\frac{1+x-1+x}{1-x} \geq 0$$

$$\frac{2x}{1-x} \geq 0$$

$\frac{2x=0}{x=0}$ $\frac{1-x=0}{1=x}$

$\frac{1+(-1)}{1-(-1)} = \frac{0}{2} = 0 \geq 1$ $\frac{1+0}{1-0} = 1 \geq 1$ $\frac{1+1}{1-1} = \frac{2}{0} \geq 1$ $\frac{1+2}{1-2} = \frac{3}{-1} = -3 \geq 1$

$$[0, 1)$$

$\{x \mid x \text{ greater than or equal to } 0 \text{ and less than } 1\}$

Apr 25-11:19 AM

$$\frac{\frac{1}{1} + \frac{1}{2}}{\frac{1}{1} - \frac{1}{2}}$$

$$\frac{2+1}{2}$$

$$\frac{3}{2} = \frac{3}{2}$$

$\frac{3}{2}$ $\frac{3}{2}$
 X C
 F

Apr 25-11:33 AM

$$x < \frac{2}{x-1}$$

$$\frac{x}{1} - \frac{2}{x-1} < 0$$

$$\frac{x(x-1) - 2}{x-1} < 0$$

$(-\infty, -1) \cup (1, 2)$

$$\frac{x^2 - x - 2}{x-1} < 0$$

$$\frac{(x-2)(x+1)}{x-1} < 0$$

$x=2$, $x=-1$, $x=1$

Apr 25-11:36 AM