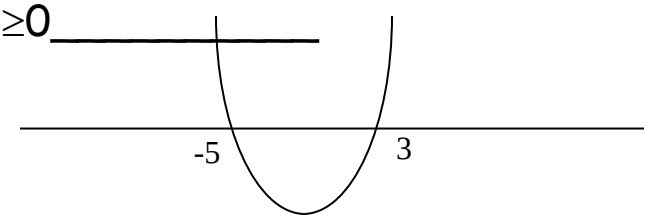
1) Solve the inequality: $x^2 + 2x \geq 15$.

__x^2+2x-15≥0__

_____(x+5)(x-3) ≥0_____



F(-6) = 9>0=>true, F(0) = -15<0=>False, F(4) = 9>0=>True _{x|x≤-5 ∩ x≥3}_

2) Solve $3x^2 - 12x < 0$.

3x(x-4)<0; Borders 0 and 4, {x|x<0 ∩ x>4}

3) Solve $\frac{x-3}{x+1} > 0$. Borders 3 and -1. +-+

f(-2) = 5>0=>true, f(0) = -3<0=>False, F(4) =(1/5)>0=>True

{x|x<-1 ∩ x>3}

4) $\frac{x^2 - x - 6}{x - 1} \leq 0$ $\frac{(x-3)(x+2)}{x-1}$, borders -2,1,3,

f(-3)=(-3/2)<0=> true, f(0)=6>0=> false,

f(2)=>-4<0=> true, f(4)>0, false {x|x<=-2 or 1<x<=3}

5) $\frac{6x - 5}{x - 2} \geq 3$ $\frac{6x-5-3(x-2)}{x-2} = \frac{3x+1}{x-2} \geq 0$

Borders: X=-1/3 or x =2

F(-1)=2/3>0, true. F(0)=-.5, false. F(4)=13/2, true

{x|x≤-1/3 or x>2}