Enock Ofori
MATH 2311
Pre-Calculus I
Ms. Palmer

10/24/18

39.

Solve the inequality

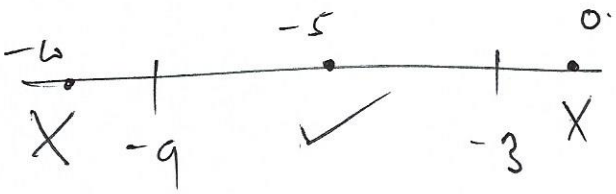
$x^2 + 7x + 3 < -5x - 24$

$\Rightarrow x^2 + 12x + 27 < 0$

$x^2 + 12x + 27 = 0$

$(x+9)(x+3) = 0$

$x = -9, \quad x = -3$



$(-10+9)(-10+3) = +$

$(-5+9)(-5+3) = = -$

$(0+9)(0+3) = +$

$(-9, -3)$

40. $\dfrac{x+1}{x^2+4x-5} \leq 0$

$= \left(\dfrac{x+1}{x^2+4x-5} = 0\right) \cdot x^2+4x-5$

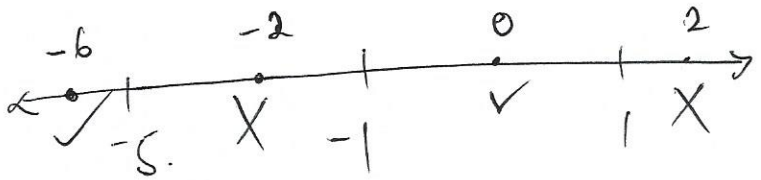
$x+1 = 0$

Zero: $x = -1$

Vertical Asymptote: x^2+4x-5

$(x+5)(x-1)$.

$x=-5 \quad x=1$. Never included.



$\dfrac{-6+1}{(-6+5)(-6-1)} = \dfrac{-}{+} = -$

$\dfrac{0+1}{(0+5)(0-1)} = -$

$\dfrac{-2+1}{(-2+5)(-2-1)} = +$

$\dfrac{2+1}{(2+5)(2-1)} = +$

$(-\infty, -5) \cup [-1, 1)$.