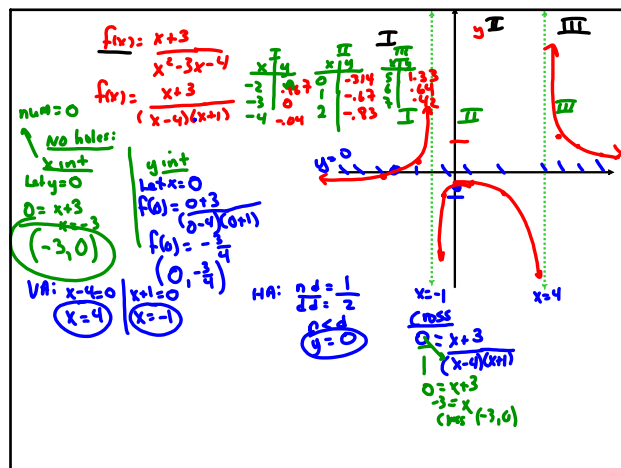


Oct 5-9:42 AM



Nov 2-1:29 PM

2a.

2a) $\frac{x-2}{x+3} < 4$

$\frac{x-2}{x+3} - \frac{4}{1} < 0$

$\frac{x-2-4(x+3)}{x+3} < 0$

$\frac{x-2-4x-12}{x+3} < 0$

$\frac{-3x-14}{x+3} < 0$

$n=0$ | $d=0$

$-3x-14=0$ | $x+3=0$

$+n+14$ | $x=-3$

$\frac{-3x}{-3} = \frac{14}{-3}$

$-5 \quad -\frac{14}{3} \quad -3 \quad 0$

$-3x-14$ + - - +

$x+3$ - + - +

$(-\infty, -\frac{14}{3}) \cup (-3, \infty)$

Nov 9-7:21 AM

Nov 6-1:52 PM

2b. $\frac{x-3}{x+4} \geq 5$

$\frac{x-3}{x+4} - \frac{5(x+4)}{x+4} \geq 0$

$\frac{-4x+23}{x+4} \geq 0$

Num • Den 0

$-4x+23=0$ $x+4=0$

$x=\frac{-23}{-4}$ $x=-4$

$[-\frac{23}{4}, -4)$

$\{x | -\frac{23}{4} \leq x < -4\}$

3. Hole: $(2, \frac{2}{3})$

VA: $x = -2$

HA: $y = 1$

Cross? and $x = 2$

4. $f(-2) = 0$

$\therefore$ yes

$(-2)^2 - 16 = 0$

$16 - 16 = 0$

Oct 5-9:51 AM

Nov 9-7:24 AM

5. $\frac{p}{q} = \pm 1, \pm 2, \pm 4$

$\begin{array}{r|rrrr} 1 & 1 & 2 & -7 & 4 \\ & \downarrow & 1 & 3 & -4 \\ \hline & 1 & 3 & -4 & 0 \end{array}$

$x^2 + 3x - 4 = 0$
 $(x+4)(x-1) = 0$
 $x = -4 \quad x = 1$
 $\{1, -4\}$

$b: 1+i \text{ also}$
 $\begin{cases} S: 2 \therefore b = -2 \\ P: 2 \therefore c = 2 \end{cases} \left\{ \begin{array}{l} x^2 - 2x + 2 \\ x^2 - bx + c \end{array} \right.$

$0 = (x+3)(x^2 - 2x + 2)$

$0 = x^3 + x^2 - 4x + 6$

$f(x) =$
function

Nov 9-7:24 AM

7. a. $f(x) = \frac{1(x-1)}{(x+2)(x-3)(x-1)}$

b. $f(x) = \frac{(x+3)}{(x+1)(x-1)}$

c. $f(x) = \frac{3x^2}{(x-2)(x-5)}$

$x^2 \overline{) 3x^2}$

$x^2 \overline{) 3x^2}$

Nov 9-7:26 AM

Nov 5-1:20 PM