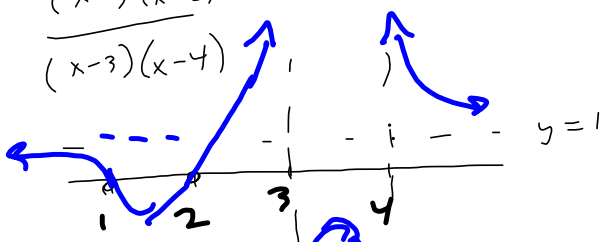
#8ish

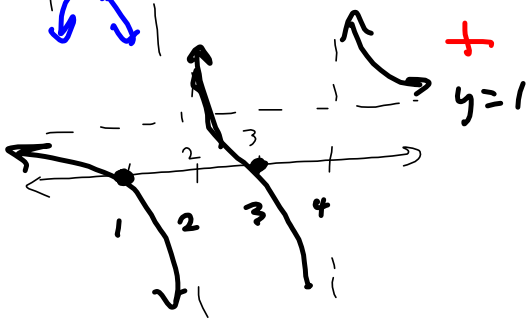
$\frac{(x-1)(x-2)}{(x-3)(x-4)}$

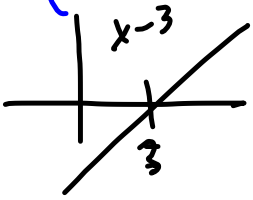


$\frac{x^2}{x^2} = 1 = y$

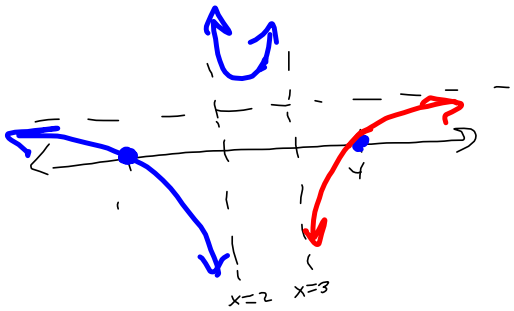
(2)

$\frac{x^2-4x+3}{x^2-6x+8} = \frac{(x-1)(x-3)}{(x-2)(x-4)}$

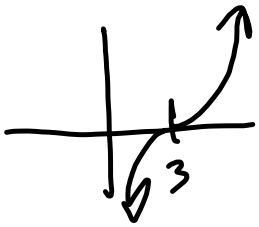




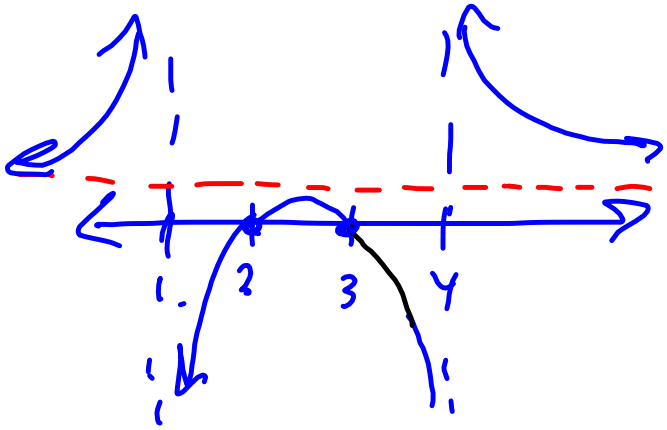
$\frac{(x-1)(x-4)}{(x-2)(x-3)}$



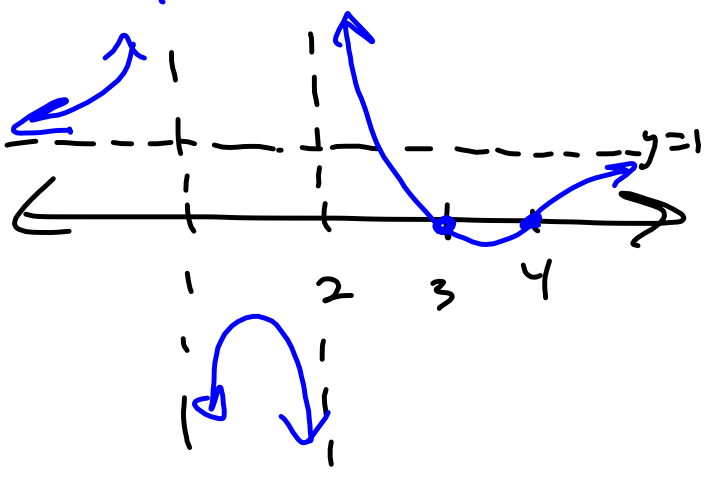
$(x-3)^3$



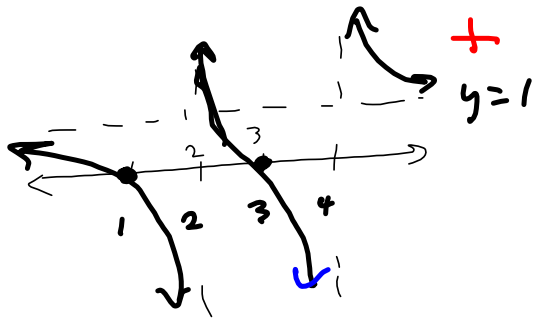
$\frac{(x-2)(x-3)}{(x-1)(x-4)}$



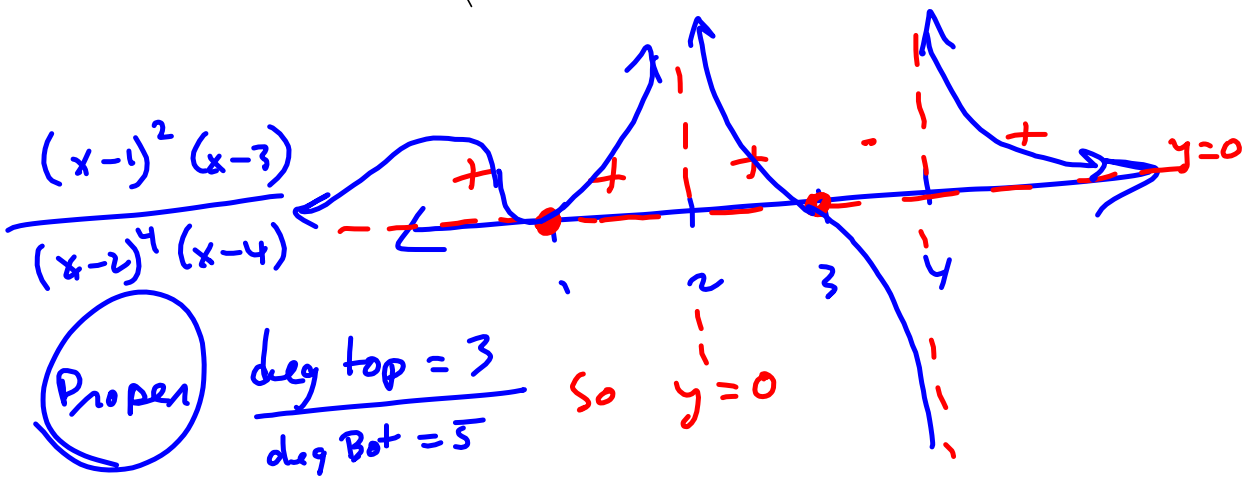
$\frac{(x-2)^{13}(x-4)^{3}}{(x-1)^{5}(x-3)^{5}}$



$\frac{(x-1)(x-3)}{(x-2)(x-4)}$



$\frac{(x-1)^2(x-3)}{(x-2)^4(x-4)}$



Proper $\frac{\text{deg top} = 3}{\text{deg Bot} = 5}$ So $y = 0$

$$\frac{2x^3 - 5x^2 - 28x + 15}{x^2 - x - 20}$$

Oblique Slant asymptote

deg Top = 3

deg Bot = 2

$$\frac{}{(2\cdot x - 1)\cdot(x + 3)\cdot(x - 5))}$$

$$(x+4)\cdot(x-5)$$

$$\begin{array}{r} 2x - 3 \\ x^2 - x - 20 \overline{)\,2x^3 - 5x^2 - 28x + 15} \\ -(2x^3 - 2x^2 - 40x) \\ \hline -3x^2 + 12x \end{array}$$

$y = 2x - 3$ is O.A.

$$R(x) = \frac{(2x-1)(x+3)(x-5)}{(x+4)(x-5)}$$

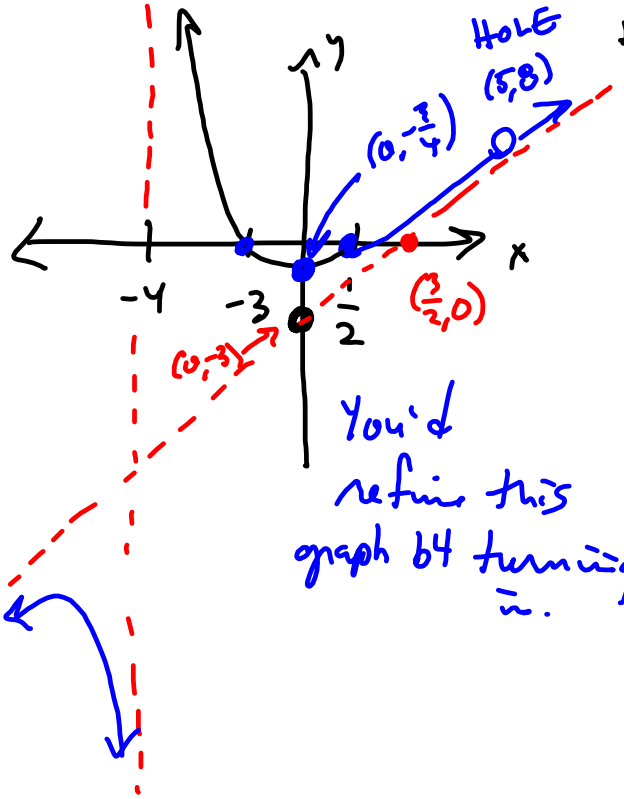
$$R^*(x) = \frac{(2x-1)(x+3)}{(x+4)}$$

$D = \mathbb{R} \setminus \{-4.5\}$

V.A. $x = -4$

$x = 5$ → NO

$x = 5$ is hole!



You'd refine this graph by turning it in.

Hole: $\frac{(2(5)-1)(5+3)}{5+4}$

$= \frac{(9)(8)}{9} = 8$

Hole (9) (5, 8)

$y = 2x - 3$ (0, -3)

$2x - 3 = 0$

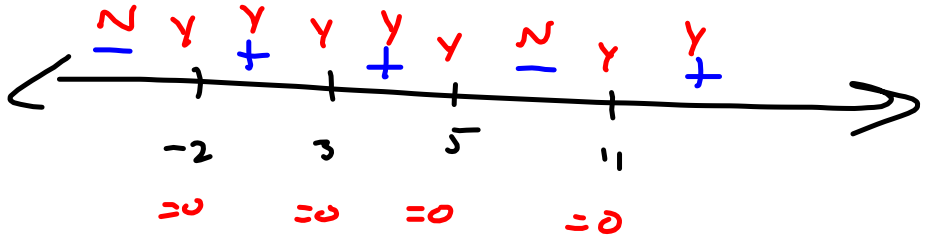
$2x = 3$

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

(3/2, 0)

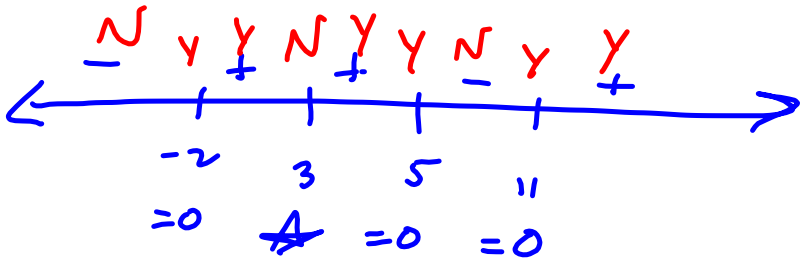
Domain $\sqrt{(x-5)(x+2)(x-3)^2(x-11)}$

$= \sqrt{\text{stuff}}$. Need stuff ≥ 0 +



$D = [-2,5] \cup [11,\infty)$

$\sqrt{\dfrac{(x-5)(x-11)(x+2)}{(x-3)^2}}$ Find D



$D = [-2,3) \cup (3,5] \cup [11,\infty)$