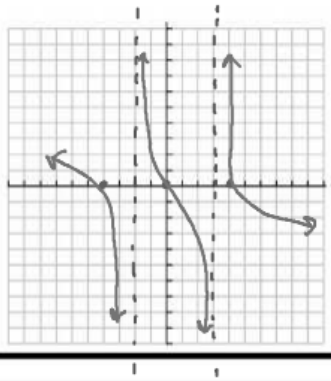
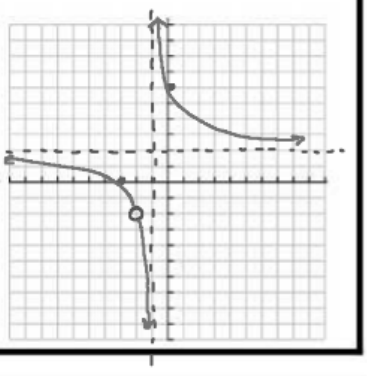
$f(x) = \frac{x^3-16x}{-4x^2+4x+24}$	$f(x) = \frac{2x^2+10x+12}{x^2+3x+2}$ $\frac{2(x+2)(x+3)}{(x+2)(x+1)}$
Zeros: $x=0, 4, -4$	Zeros: $x=-3$
y-intercepts: $(0,0)$	y-intercepts: $(0,6)$
Points of Discontinuity: $x=-2, 3$	Points of Discontinuity: $x=-2, -1$
Hole: None	Hole: $x=-2$
Vertical Asymptote: $x=-2, 3$	Vertical Asymptote: $x=-1$
Horizontal Asymptote: None	Horizontal Asymptote: $y=2$
Domain: $(-\infty,-2)\cup(-2,3)\cup(3,\infty)$	Domain: $(-\infty,-2)\cup(-2,-1)\cup(-1,\infty)$
Range: $(-\infty,\infty)$	Range: $(-\infty,-2)\cup(-2,2),(2,\infty)$
	

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

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

$\frac{2}{-1}$

$f(x) = \frac{x^2-4}{x^2-9}$ $\frac{(x+2)(x-2)}{(x+3)(x-3)}$

Zeros:
$x = \pm 2$

y-intercepts:
$(0, \frac{4}{9})$

Points of Discontinuity:
$x = \pm 3$

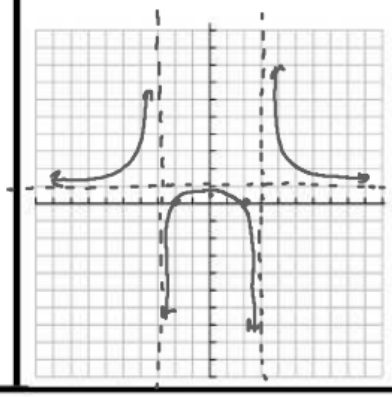
Hole:
None

Vertical Asymptote:
$x = \pm 3$

Horizontal Asymptote:
$y = 1$

Domain:
$(-\infty, -3) \cup (-3, 3) \cup (3, \infty)$

Range:
$(-\infty, \frac{4}{9}) \cup (1, \infty)$



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

Zeros:
$x = 3, \cancel{-2}$

y-intercepts:
$(0, \frac{3}{4})$ $\cancel{\frac{3}{8}}$

Points of Discontinuity:
$x = 4, -2$

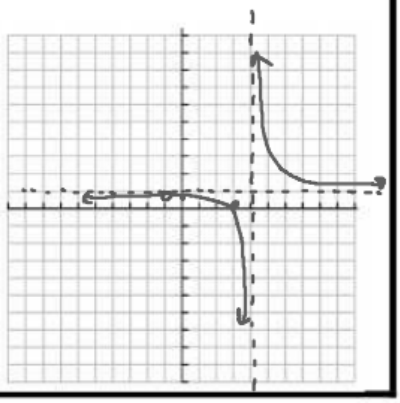
Hole:
$x = -2$

Vertical Asymptote:
$x = 4$

Horizontal Asymptote:
$y = 1$

Domain:
$(-\infty, -2) \cup (-2, 4) \cup (4, \infty)$

Range:
$(-\infty, \frac{5}{2}) \cup (\frac{5}{2}, 1) \cup (1, \infty)$



$y = -2$

$\frac{(x-3)(x+2)}{(x-4)(x+2)}$ $\frac{x-3}{x-4} = \frac{-5}{-6}$