

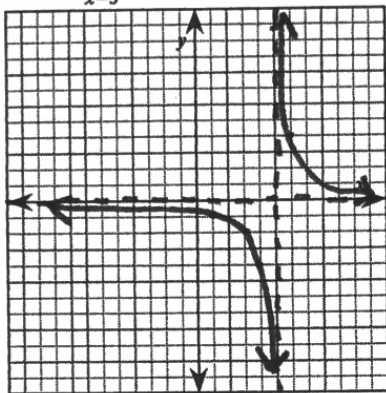
6.3 Graphing Rationals

For each function below:

- Find the values of x which must be excluded from the domain.
- Find any holes, vertical, horizontal, and/or slant asymptotes.
- Use intercepts, asymptotes, and other points to sketch the graphs.

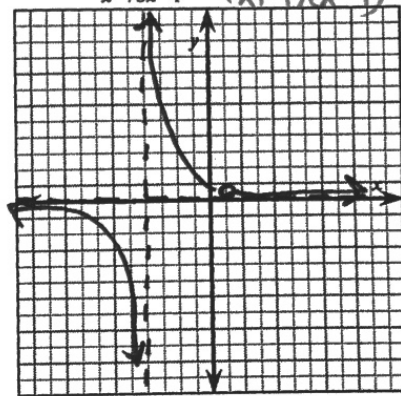
1. $f(x) = \frac{4}{x-5}$

- A. $x \neq 5$
 B. VA $x=5$
 HA $y=0$



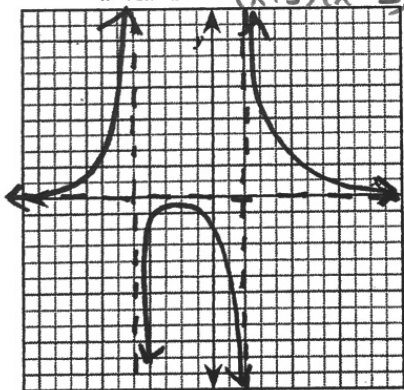
2. $f(x) = \frac{x-1}{x^2+3x-4} = \frac{(x-1)}{(x+4)(x-1)}$

- A. $x \neq 1, -4$
 B. VA $x=-4$
 Hole $x=1$
 HA $y=0$



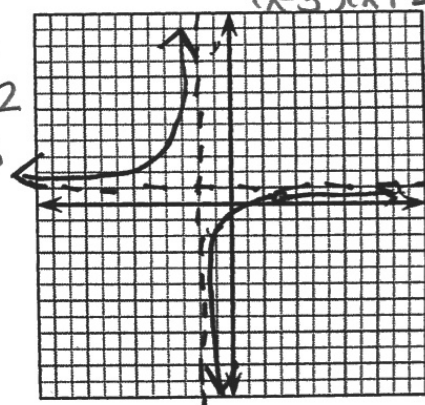
3. $f(x) = \frac{2}{x^2+3x-10} = \frac{2}{(x+5)(x-2)}$

- A. $x \neq -5, 2$
 B. VA $x=-5$
 $x=2$
 HA $y=0$

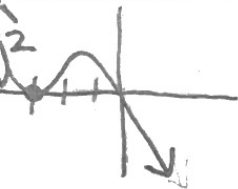


4. $f(x) = \frac{x^2-4x+3}{x^2-x-6} = \frac{(x-3)(x-1)}{(x-3)(x+2)}$

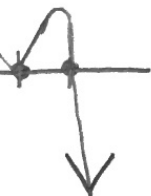
- A. $x \neq -2, 3$
 B. VA $x=-2$
 hole $x=3$
 HA $y=1$



characteristics.

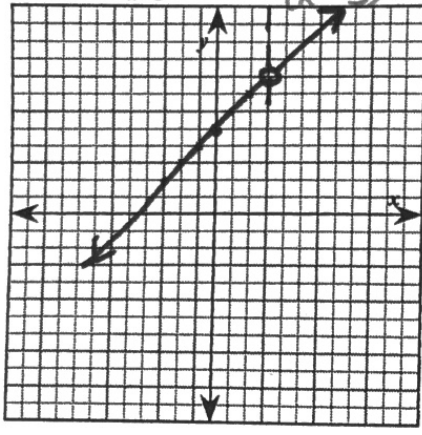


characteristics.



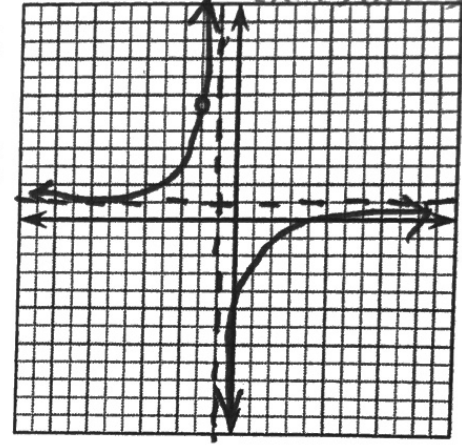
A. $x \neq 3$
 B. hole $x=3$
 $y=x+5$
 with hole
 at $x=3$

5. $f(x) = \frac{x^2+2x-15}{x-3} = \frac{(x+5)(x-3)}{(x-3)}$



A. $x \neq -1, -2$
 B. VA $x=-1$
 hole $x=-2$
 HA $y=1$

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

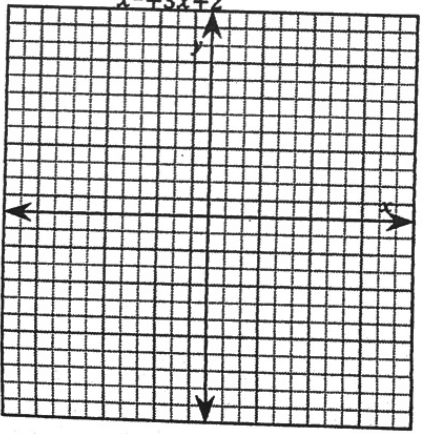


6.4 More Graphing Rationals

For each function below:

- Find the values of x which must be excluded from the domain.
- Find any holes, vertical, horizontal, and/or slant asymptotes.
- Use intercepts, asymptotes, and other points to sketch the graphs.

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



2) $h(x) = \frac{-2x^2 + 3x + 2}{x^2 - x - 12}$

