

Name \_\_\_\_\_

Date \_\_\_\_\_

**Slant Asymptotes:** If the degree on the \_\_\_\_\_ is \_\_\_\_\_ higher than the degree on the \_\_\_\_\_, then the function has a slant asymptote, \_\_\_\_\_.

- Use \_\_\_\_\_ to find the equation.

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

Ex 2.  $f(x) = \frac{x^2 + 7x + 12}{x - 3}$

Ex 3. What if  $f(x) = \frac{x^3 + x^2 - x + 5}{x^2 - 4}$  ?

**Increasing & Decreasing:** \_\_\_\_\_, read from left to right.

\*\*Only use \_\_\_\_\_.\*\*

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

V.A.: \_\_\_\_\_

Hole: \_\_\_\_\_

H.A.: \_\_\_\_\_

Inc: \_\_\_\_\_

S.A.: \_\_\_\_\_

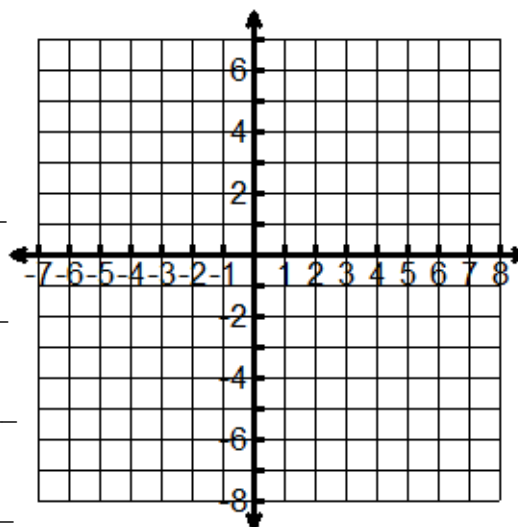
Dec: \_\_\_\_\_

x-int(s): \_\_\_\_\_

Domain: \_\_\_\_\_

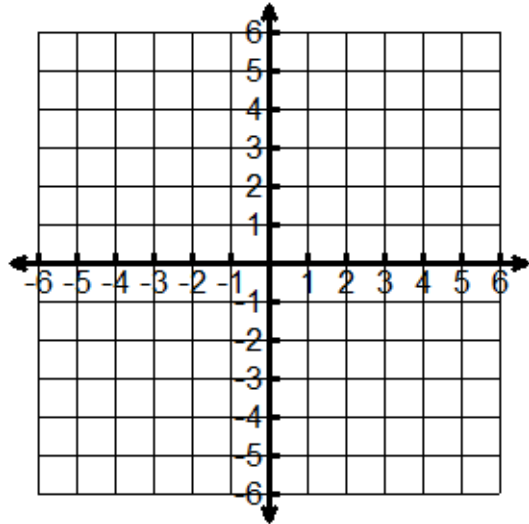
y-int: \_\_\_\_\_

Range: \_\_\_\_\_



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

V.A.: \_\_\_\_\_ Hole: \_\_\_\_\_  
 H.A.: \_\_\_\_\_ Inc: \_\_\_\_\_  
 S.A.: \_\_\_\_\_ Dec: \_\_\_\_\_  
 x-int(s): \_\_\_\_\_ Domain: \_\_\_\_\_  
 y-int: \_\_\_\_\_ Range: \_\_\_\_\_



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

V.A.: \_\_\_\_\_ Hole: \_\_\_\_\_  
 H.A.: \_\_\_\_\_ Inc: \_\_\_\_\_  
 S.A.: \_\_\_\_\_ Dec: \_\_\_\_\_  
 x-int(s): \_\_\_\_\_ Domain: \_\_\_\_\_  
 y-int: \_\_\_\_\_ Range: \_\_\_\_\_

