

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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**Find the vertical & horizontal asymptotes, x & y ints, holes, and domain & range. Graph when appropriate:**

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

Vert: \_\_\_\_\_ Hor: \_\_\_\_\_

x-Int.: \_\_\_\_\_ y-int: \_\_\_\_\_

hole: \_\_\_\_\_

D: \_\_\_\_\_ R: \_\_\_\_\_

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

Vert: \_\_\_\_\_ Hor: \_\_\_\_\_

x-Int.: \_\_\_\_\_ y-int: \_\_\_\_\_

hole: \_\_\_\_\_

D: \_\_\_\_\_ R: \_\_\_\_\_

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

Vert: \_\_\_\_\_ Hor: \_\_\_\_\_

x-Int.: \_\_\_\_\_ y-int: \_\_\_\_\_

hole: \_\_\_\_\_

D: \_\_\_\_\_ R: \_\_\_\_\_

4.  $f(x) = \frac{x^2 - x - 12}{x}$

Vert: \_\_\_\_\_ Hor: \_\_\_\_\_

x-Int.: \_\_\_\_\_ y-int: \_\_\_\_\_

hole: \_\_\_\_\_

D: \_\_\_\_\_ R: \_\_\_\_\_

5.  $f(x) = \frac{5}{x+3}$

Vert: \_\_\_\_\_ Hor: \_\_\_\_\_

x-Int.: \_\_\_\_\_ y-int: \_\_\_\_\_

hole: \_\_\_\_\_

D: \_\_\_\_\_ R: \_\_\_\_\_

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

Vert: \_\_\_\_\_ Hor: \_\_\_\_\_

x-Int.: \_\_\_\_\_ y-int: \_\_\_\_\_

hole: \_\_\_\_\_

D: \_\_\_\_\_ R: \_\_\_\_\_

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

Vert: \_\_\_\_\_ Hor: \_\_\_\_\_

x-Int.: \_\_\_\_\_ y-int: \_\_\_\_\_

hole: \_\_\_\_\_

D: \_\_\_\_\_ R: \_\_\_\_\_

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

Vert: \_\_\_\_\_ Hor: \_\_\_\_\_

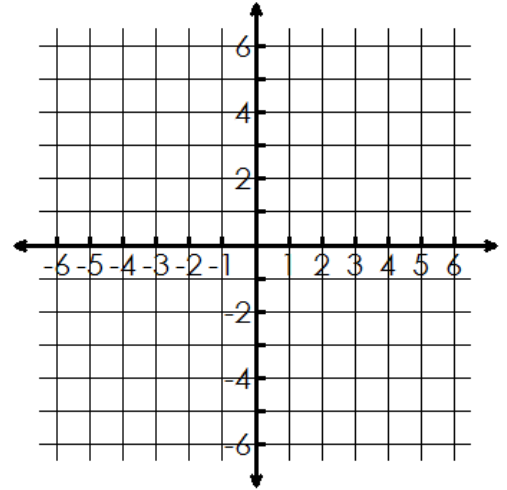
x-Int.: \_\_\_\_\_ y-int: \_\_\_\_\_

hole: \_\_\_\_\_

D: \_\_\_\_\_ R: \_\_\_\_\_

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

Vert: \_\_\_\_\_  
 Hor: \_\_\_\_\_  
 x-Int.: \_\_\_\_\_  
 y-int: \_\_\_\_\_  
 hole: \_\_\_\_\_  
 Domain: \_\_\_\_\_  
 Range: \_\_\_\_\_



10.  $f(x) = \frac{x^2}{x^2 - 4}$

Vert: \_\_\_\_\_  
 Hor: \_\_\_\_\_  
 x-Int.: \_\_\_\_\_  
 y-int: \_\_\_\_\_  
 holes: \_\_\_\_\_  
 Domain: \_\_\_\_\_  
 Range: \_\_\_\_\_

