

Find the VA and HA of the following:

1.  $\frac{x^2 + 4x - 5}{x^2 + 9x + 20}$

VA \_\_\_\_\_

HA \_\_\_\_\_

2.  $\frac{x^2 - 9}{x + 3}$

VA \_\_\_\_\_

HA \_\_\_\_\_

3.  $\frac{x + 6}{2x^2 + 9x - 18}$

VA \_\_\_\_\_

HA \_\_\_\_\_

Graph each equation and fill in all the blanks.

Graph the following rational function. Be sure to include all intercepts, holes, and asymptotes on the graph.

4.  $y = \frac{3}{x + 2}$

VA \_\_\_\_\_

Holes \_\_\_\_\_

x-int \_\_\_\_\_

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

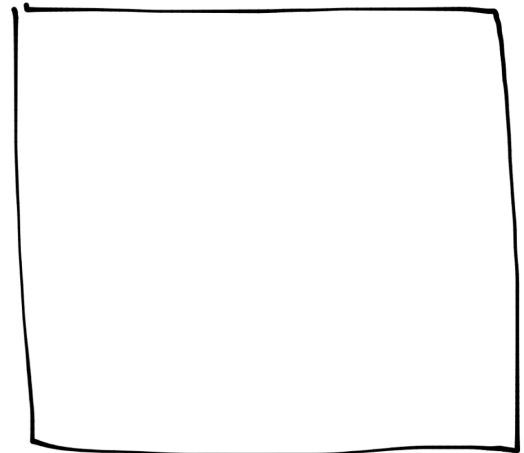
HA \_\_\_\_\_

Xmin = \_\_\_\_\_

Xmax = \_\_\_\_\_

Ymin = \_\_\_\_\_

Ymax = \_\_\_\_\_



5.  $y = \frac{x^2 - 9}{x - 3}$

VA \_\_\_\_\_

Holes \_\_\_\_\_

x-int \_\_\_\_\_

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

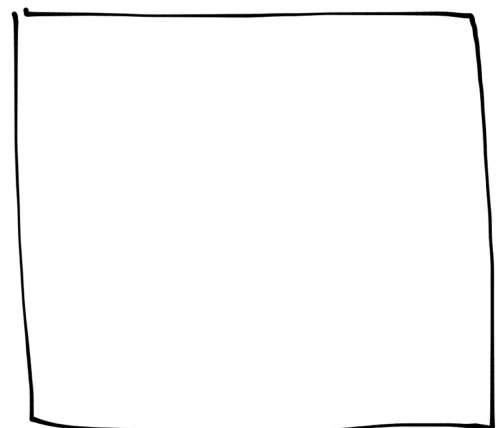
HA \_\_\_\_\_

Xmin = \_\_\_\_\_

Xmax = \_\_\_\_\_

Ymin = \_\_\_\_\_

Ymax = \_\_\_\_\_



Graph the following rational function. Be sure to include all intercepts, holes, and asymptotes on the graph.

6.  $y = \frac{x^2 - 2x - 3}{x - 2}$

VA \_\_\_\_\_

Holes \_\_\_\_\_

x-int \_\_\_\_\_

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

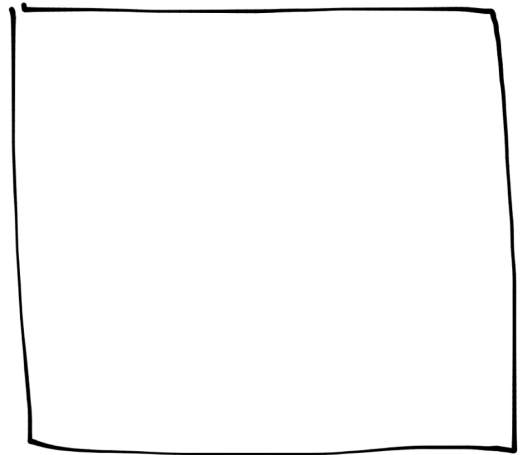
HA \_\_\_\_\_

Xmin = \_\_\_\_\_

Xmax = \_\_\_\_\_

Ymin = \_\_\_\_\_

Ymax = \_\_\_\_\_



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

VA \_\_\_\_\_

Holes \_\_\_\_\_

x-int \_\_\_\_\_

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

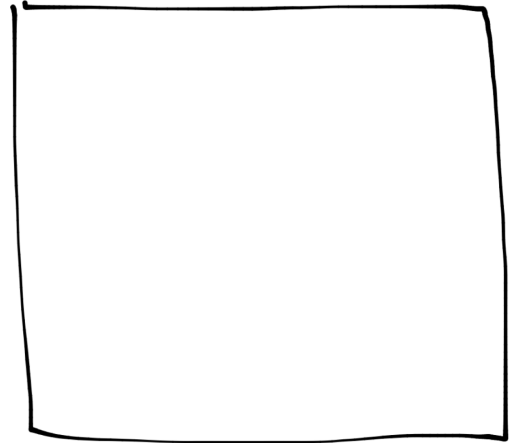
HA \_\_\_\_\_

Xmin = \_\_\_\_\_

Xmax = \_\_\_\_\_

Ymin = \_\_\_\_\_

Ymax = \_\_\_\_\_



8.  $y = \frac{x-4}{-4x-16}$

VA \_\_\_\_\_

Holes \_\_\_\_\_

x-int \_\_\_\_\_

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

HA \_\_\_\_\_

Xmin = \_\_\_\_\_

Xmax = \_\_\_\_\_

Ymin = \_\_\_\_\_

Ymax = \_\_\_\_\_

