

## Assignment 4.2

Identify the Vertical Asymptote (VA), Horizontal Asymptote (HA), domain, and range for each function. Then graph the function.

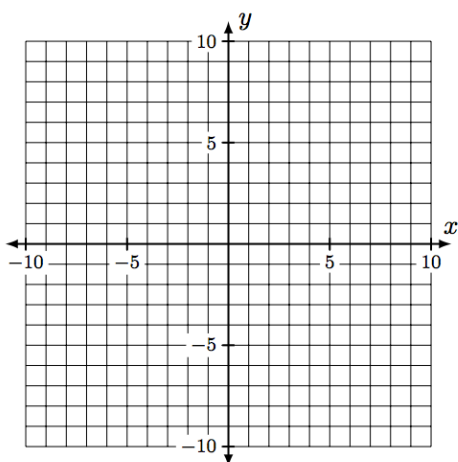
1.  $f(x) = \frac{4}{x}$

VA:

HA:

D:

R:



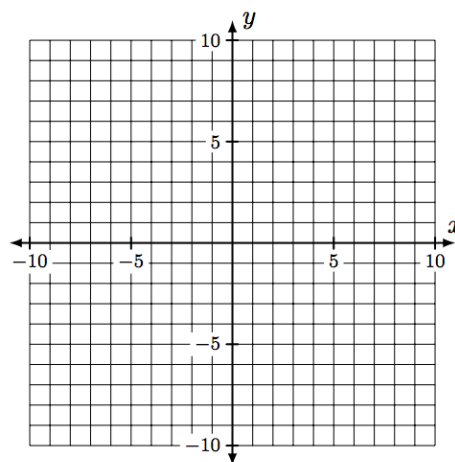
2.  $f(x) = \frac{3}{x} + 2$

VA:

HA:

D:

R:



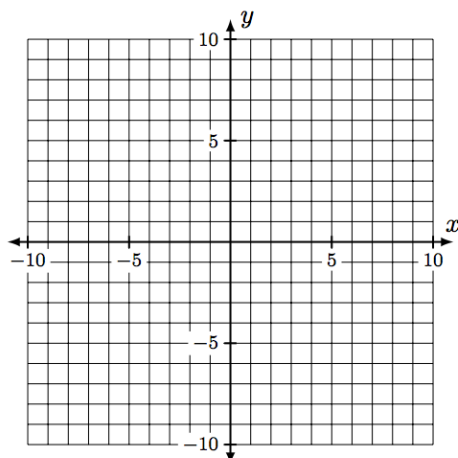
3.  $f(x) = -\frac{5}{x-3}$

VA:

HA:

D:

R:



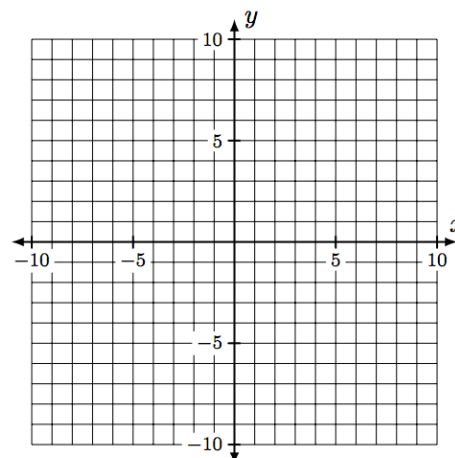
4.  $f(x) = \frac{1}{x+5} - 4$

VA:

HA:

D:

R:



## Refresh Your Memory

Use the given roots to find the remaining roots of each cubic function.

5.  $f(x) = x^3 - x^2 - 17x - 15$

Root:  $x = -1$

6.  $f(x) = x^3 - 3x^2 - 61x + 63$

Root:  $x = 1$

7.  $f(x) = 6x^3 - 18x^2 - 60x$

Root:  $x = 0$

8.  $f(x) = x^3 - 14x^2 + 57x - 72$

Root:  $x = 8$