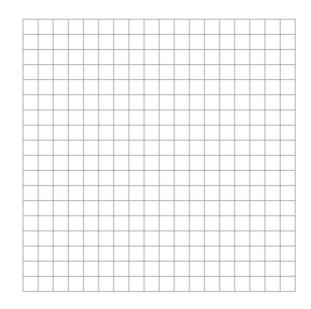
## Graphing Rational Functions to Find its Domain and Range

Graph the function and then find the domain and range.

1 
$$y = \frac{1}{x+5} - 2$$

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

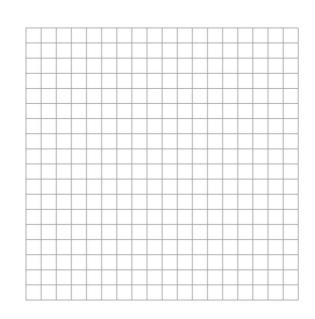
Range : \_\_\_\_\_



2 
$$y = \frac{3}{x} + 5$$

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

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



Identify the domain and range of each function.

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

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

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

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

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

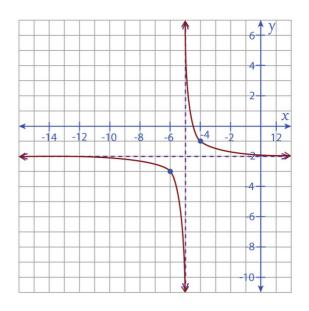
## Graphing Rational Functions to Find its Domain and Range

## **Answers**

1 
$$y = \frac{1}{x+5} - 2$$

Domain: all reals,  $x \neq -5$ 

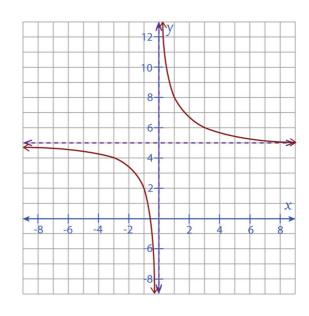
Range: <u>all reals</u>,  $y \neq -2$ 



2 
$$y = \frac{3}{x} + 5$$

Domain: all reals,  $x \neq 0$ 

Range: all reals,  $y \neq 5$ 



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

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

Domain: all reals,  $x \neq 0$ 

Range: all reals,  $y \neq 0$ 

Domain: all reals,  $x \neq 1$ 

Range: all reals,  $y \neq 1$