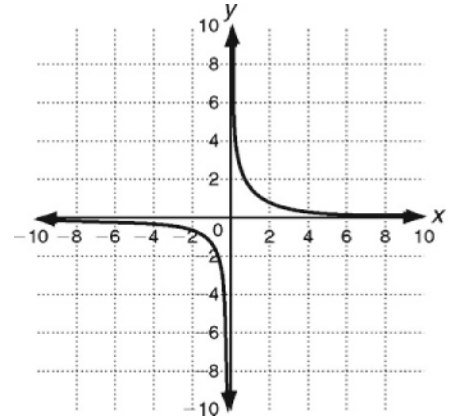Name _____ Date _____ Class_____

Graphing Simple Rational Functions

Practice and Problem Solving: A/B

Using the graph of $f(x) = \dfrac{1}{x}$ as a guide, describe

the transformation and graph the function.

1. $g(x) = \dfrac{2}{x+4}$

_____

Identify the asymptotes, domain, and range of each function.

2. $g(x) = \dfrac{1}{x-3} + 5$ _____

_____
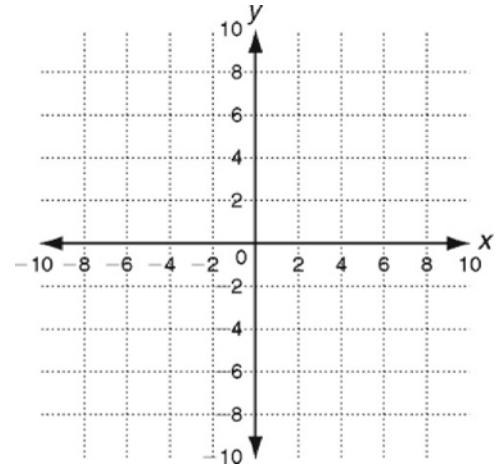
3. $g(x) = \dfrac{1}{x+8} - 1$ _____

_____

Identify the asymptotes of the function. Then graph.

4. $f(x) = \dfrac{x^2 + 4x - 5}{x+1}$

a. Vertical asymptote:

_____

b. Horizontal asymptote:

_____

c. Graph.

Solve.

5. The number *n* of daily visitors to a new store can be modeled by the function
$n = \dfrac{(250x + 1000)}{x}$, where *x* is the number of days the store has been open.

a. What is the horizontal asymptote of this function
and what does it represent?   _____

b. To the nearest integer, how many
visitors can be expected on day 30?   _____