Name_____ Class_____ Date _____

8-2B Practice

Form G

The Reciprocal Function Family

Sketch the asymptotes and the graph of each function. Identify the domain and range.

7. $y = \frac{1}{x} + 3$

Asymptotes

$x = 0$ $y = 3$

Domain

$\mathbb{R}$ except 0

Range

$\mathbb{R}$ except 3

8. $y = \frac{3}{4x}$

Asymptotes

$x = 0$ $y = 0$

Domain

$\mathbb{R}$ except 0

Range

$\mathbb{R}$ except 0

9. $y = \frac{3}{x-1} + 2$

Asymptotes

$x = 1$

$y = 2$

Domain

$\mathbb{R}$ except 1

Range

$\mathbb{R}$ except 2

Write an equation for the translation of $y = -\frac{3}{x}$ that has the given asymptotes.

10. $x = -1; y = 3$

$h = -1$

$y = \frac{-3}{x+1} + 3$

11. $x = 4; y = -2$

$h = 4$

$y = \frac{-3}{x-4} - 2$