Transforming the Reciprocal Function Video Worksheet

Name:_____ Date: _____

Learning Target: I can identify the parent function and transformations of the reciprocal function family.

Directions: Complete the following problems. Use the video if you need help or reminders.

1. The parent function for the reciprocal function family is _____.

2. The general equation transforming a reciprocal function is: _____, in which *a* causes _____ and _____, *h* _____, and *k* _____.

3. Write the equation that models a translation of the graph $y = \frac{1}{x}$ with asymptotes of $x = 4$ and $y = -3$.	4. Using the equation $y = \frac{-4}{x} + 2$, identify the parent function and describe the transformations.
5. State the asymptotes, identify the domain and range of the graph of $y = \frac{1}{x-2} - 7$.	6. Define the terms: a) point of discontinuity b) x-intercept c) y-intercept

Transforming the Reciprocal Function: Your Turn

Answer the following questions:

1. Write the equation that models a translation of the graph $y = \frac{1}{x}$ with asymptotes of $x = -2$ and $y = 5$.	2. Using the equation $y = \frac{6}{x-2} - 5$, identify the parent function and describe the transformations.
3. State the asymptotes, identify the domain and range of the graph of $y = \frac{1}{x+4} - 5$.	4. State the asymptotes and y-intercept, identify the domain and range of the graph of $y = \frac{1}{x-9} + 8$.