

Name: _____

Show work needed to justify your answer.

Date: _____

HW: # 15: Math IBSL - Standard 15 -Transforming the Reciprocal Function

5 points



You should not use your GDC for questions 1, 2 and 3.

1 Identify the horizontal and vertical asymptotes of these functions, and state the range and domain.

d $y = \frac{5}{x+5}$

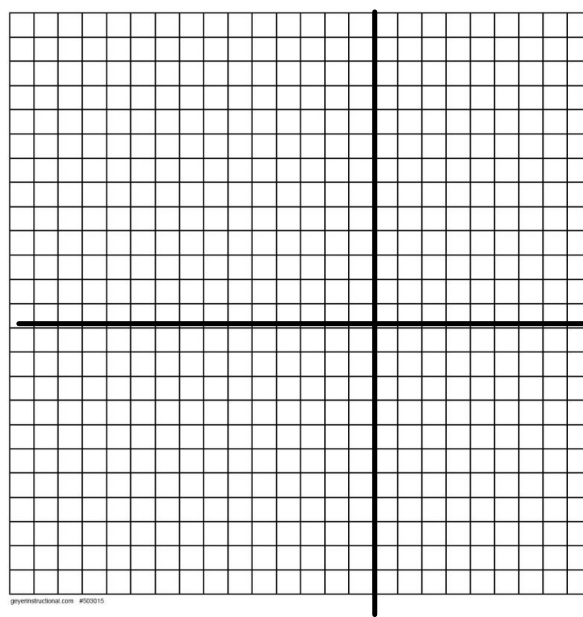
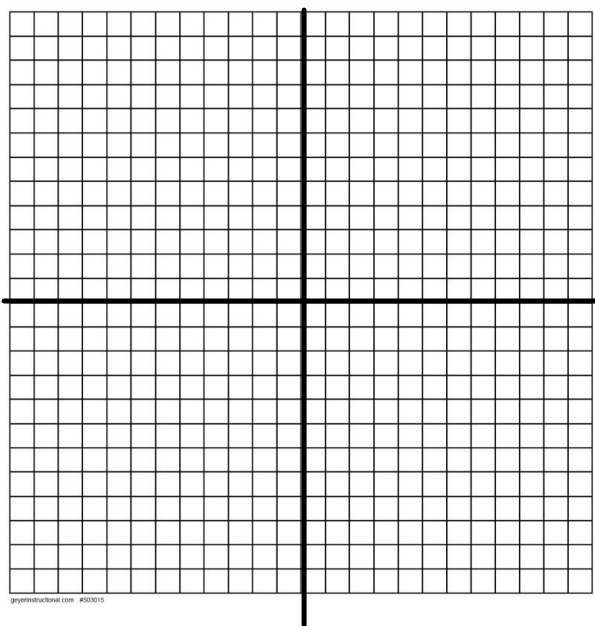
e $y = \frac{12}{x+1} + 2$

h $y = \frac{-4}{x-4} - 4$

2 Sketch the graph of each function. Show the asymptotes as dotted lines and state the domain and range.

b $y = \frac{-1}{x+4}$

c $y = \frac{1}{x+4} + 1$



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3 Each function is a transformation $y = \frac{1}{x}$.

Match the function with its graph. Explain your reasoning and then describe the transformation.

a $y = \frac{1}{x-2}$

b $y = \frac{-1}{x-2}$

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

d $y = \frac{1}{x-2} - 2$

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

