Math 11: Unit 6.6 Reciprocal Equations

   A.   What is it?
-product of a number and its reciprocal = 1

Ex:

-similarly, functions can be reciprocals of each other also:

Ex: y =x and y=   are reciprocals

Ex: y = f(x) and y =   are reciprocals

   B.   What does the reciprocal of a linear function look like?

Lets graph   Y = x   vs   y =

-note: when y =

...as 'x' gets very _____, 'y' gets very _____ because as 'x' approaches infinity, 'y' gets closer to 'zero', but never quite reaches 'zero'... gives us horizontal asymptotes, or horizontal boundary lines

...as 'x' gets very _____, 'y' gets very _____, because as 'x' approaches 'zero', 'y' gets closer to infinity...gives us vertical asymptote, or vertical boundary line.

B) if _____ is our standard, can we get a 'general equation' to predict what similar reciprocal functions look like?

-before: y= ±a(x-p)² + q   can we create something for reciprocal linear functions

Do:

So: $y = \pm a \left(\dfrac{1}{x-p} \right) + q$

-do handout

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