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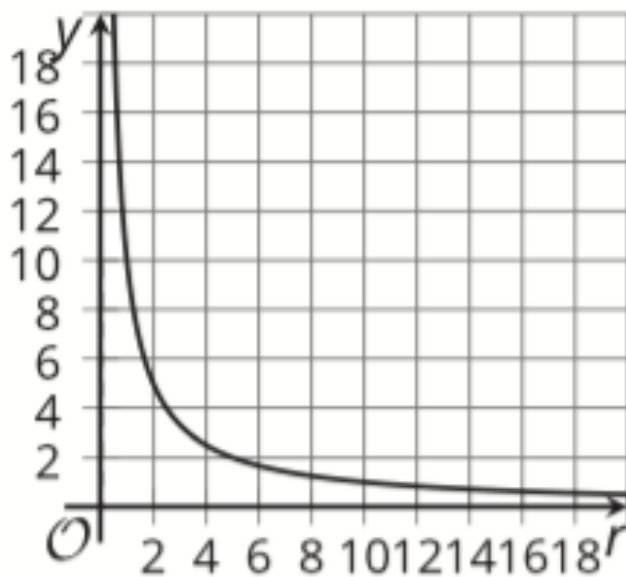
Unit 3	Rational Functions, Expressions, & Equations	Section 3.1	What is a Rational Function?
Lesson #17 Examples of Rational Functions			
I should be able to:			
<ul style="list-style-type: none"> ✓ Create a rational function to model a real world situation ✓ Interpret the behavior of a rational function in context 			

1. Kiran's aunt plans to go on a 10-mile bike ride.
 - a. How long will it take if she bikes at an average rate of 8 miles per hour?
 - b. How long will it take if she bikes at an average rate of r miles per hour?
 - c. Kiran wants to join his aunt, but he only has 45 minutes to exercise. What will their average rate need to be for him to finish on time?
 - d. What will their average rate need to be if they have t hours to exercise?
2. Kiran plans to bike 10 miles.
 - a. Write an equation that gives his time, t in hours, as a function of his rate, r in miles per hour.
 - b. What is the meaning of $t(8)$? Does this value make sense? Explain your reasoning
 - c. What is the meaning of $t(0)$? Does this value make sense? Explain your reasoning



A21A 2019-2020

- d. Below is the graph of $t(r)$. Why does it look the way it does and why is it only in the first quadrant?



- e. As r gets closer and closer to 0, what does the behavior of the function tell you about the situation?
- f. As r gets larger and larger, what does the end behavior of the function tell you about the situation?