



Average Value of a Function

Student Activity



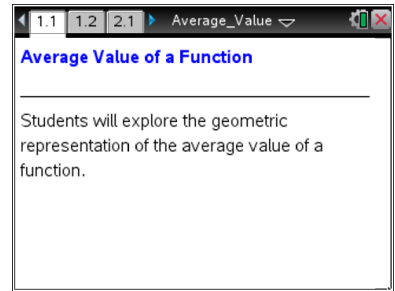
Name _____

Class _____

Open the TI-Nspire document *Average_Value.tns*.

Objective: To examine areas as integrals and as rectangles for given functions in order to determine the properties of functions that allow the areas to be equal.

Directions: For each of the problems, move the open circle until the area of the rectangle matches the area under the curve.



Move to page 1.2.

Record the function, limits of integration, and the *c* value (**cval**) for each problem.

<p>Move to page 2.1.</p> <p>Function:</p> <p>Limits of Integration:</p>	<p><i>cval:</i></p>
<p>Move to page 3.1.</p> <p>Function:</p> <p>Limits of Integration:</p>	<p><i>cval:</i></p>
<p>Move to page 4.1.</p> <p>Function:</p> <p>Limits of Integration:</p>	<p><i>cval:</i></p>
<p>Move to page 5.1.</p> <p>Function:</p> <p>Limits of Integration:</p>	<p><i>cval:</i></p>
<p>Move to page 6.1.</p> <p>Function:</p> <p>Limits of Integration:</p>	<p><i>cval:</i></p>



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1. Was the c value always between the limits of integration?
2. What is the relationship between the area of the rectangle and the integral area?
3. What property of a function held when the areas were equal?
4. Can this relationship be written using calculus notation?

Notes: (Take notes here)

Exploration: (Record your solution here)