**Blue Waters Petascale Semester Curriculum v1.0**

**Unit 4: OpenMP**

**Lesson 7: OpenMP Applications & Practice**

**Sample Assessment**

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1. Write a single core C program for calculating the area under a curve (x^2) using one of these rules: the right boundary, the midpoint, and the trapezoidal rule. (Note: The single core example C program in this lesson used the left boundary rule.)
2. Implement the shared memory concepts in OpenMP to parallelize the single core C program for calculating the area under a curve (x^2) with one of the rules on #1).