

## Chapter 4 Problem Wrap-Up Rubric

BLM 4-11

Categories	Level 1	Level 2	Level 3	Level 4
<b>Knowledge and Understanding</b> <ul style="list-style-type: none"> <li>diagrams that include all information for parts a) and b)</li> <li>for part a), accurate calculation of the arc length, including the formula used and concluding statement with correct units</li> <li>for part b), development of the derivation asked for in the question</li> <li>for technology use, the inclusion of features listed in the question, smooth operation of the animation, and obvious start, stop, and reset controls</li> </ul>	<ul style="list-style-type: none"> <li>demonstrates little understanding of arc length, and development of the derivation in part b)</li> <li>labelled diagrams that include some information for parts a) and b)</li> <li>for technology use, the inclusion of two or three of the features listed in the question, smooth operation of the animation, and obvious start, stop, and reset controls</li> <li>solutions are somewhat accurate</li> </ul>	<ul style="list-style-type: none"> <li>demonstrates some understanding of arc length, and development of the derivation in part b)</li> <li>labelled diagrams that include most information for parts a) and b)</li> <li>for technology use, the inclusion of three or four of the features listed in the question, smooth operation of the animation, and obvious start, stop, and reset controls</li> <li>solutions to most parts of the question are provided and mostly accurate</li> </ul>	<ul style="list-style-type: none"> <li>demonstrates considerable understanding of arc length, and development of the derivation in part b)</li> <li>neat, labelled diagrams that include all information for parts a) and b)</li> <li>for technology use, the inclusion of at least five of the features listed in the question, smooth operation of the animation, and obvious start, stop, and reset controls</li> <li>solutions to most parts of the question are provided and are all accurate</li> </ul>	<ul style="list-style-type: none"> <li>demonstrates thorough understanding of arc length, and development of the derivation in part b)</li> <li>neat, labelled diagrams that include all information for parts a) and b)</li> <li>for technology use, the inclusion of at least five of the features listed in the question, smooth operation of the animation, and obvious start, stop, and reset controls</li> <li>solutions to all parts of the question are provided and are all accurate</li> </ul>
<b>Thinking</b> <ul style="list-style-type: none"> <li>Prepares a plan to solve the problem.</li> <li>Carries out the plan.</li> </ul>	<ul style="list-style-type: none"> <li>needs extensive assistance to begin organizing a plan and needs some steps to follow</li> </ul>	<ul style="list-style-type: none"> <li>needs some assistance to organize and implement an effective strategy</li> </ul>	<ul style="list-style-type: none"> <li>needs minimal assistance to organize and implement an effective strategy</li> </ul>	<ul style="list-style-type: none"> <li>needs no assistance to organize and implement an effective strategy</li> </ul>
<b>Communication</b> <ul style="list-style-type: none"> <li>clear explanations and full justifications</li> <li>correct use of mathematical language</li> </ul>	<ul style="list-style-type: none"> <li>does not clearly explain or justify solution</li> <li>uses limited mathematical form</li> </ul>	<ul style="list-style-type: none"> <li>explains and justifies solution somewhat</li> <li>uses minimal mathematical form</li> </ul>	<ul style="list-style-type: none"> <li>explains and justifies solution fully</li> <li>uses good mathematical form</li> </ul>	<ul style="list-style-type: none"> <li>explains, justifies and shows insight into the complexities of the solution</li> <li>uses excellent mathematical form</li> </ul>