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| **Topic 5: Calculus** | **Derivatives** |
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| * 1. Using the definition of a derivative as , show that the derivative of is .
	2. Using the same function, , find . Explain why this limit may be used as a better approximation that the limit used in part (a).
 | (4 marks)(4 marks) |
| Mark scheme:1.
2.
 | (M1)(A1)(A1)(A1) (AG)(A1)(A1)(A1)(R1) |