**Yr 12 Geometry Tasks**

**(Geometrical Applications of Calculus)**

**Due Date: 20th November (Friday week 7, term 4)**

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| **Exercise** | **Questions** | **Topic** | **Completed**  **** |
| **Ex2.1** | * **Read geometry properties page 31-33 *and summarise if necessary*** * **Copy examples 1, 2 and 3 page 33-34** * **Attempt ex 2.1 (Questions 1,2,4,6,8,14,18,24)** | **Gradient of a Curve** |  |
| **Ex 2.2** | * **Read page 37 *and summarise if necessary*** * **Copy example 2 page 39** * **Attempt ex 2.2 (Questions 1,3,5,7,9,11,16)** | **Stationary Points** |  |
| **Ex 2.3** | * **Copy examples 1,2,3 page 41-42** * **Attempt ex 2.3 (Questions 1,2,3,4,6,9,12)** | **Higher Derivatives** |  |
| **Ex 2.4** | * **Read properties page 43-44 *and summarise if necessary*** * **Copy examples 1,2 and 3 page 44-45** * **Attempt ex 2.4 (Questions 1,2,3,6,7,8,15,17)** | **Sign of the Second derviative** |  |
| **Ex 2.5** | * **Copy examples 1 and 2 page 47** * **Attempt ex 2.5 (Questions 1,2,4,6,8,10)** | **Shape of the Curve** |  |
| **Ex 2.6** | * **Read and summarise page 50-51** * **Copy examples 1 and 2 page 51-52** * **Attempt ex 2.6 (Questions 1,3,5,7,9,11,13,15)** | **Types of Stationary points** |  |
| **Ex 2.7** | * **Read and copy blue box page 54** * **Copy example 1 page 54-55, read example 2** * **Attempt ex 2.7 (Questions 2,4,6,8,10,12,14)** | **Curve sketching** |  |
| **Ex 2.8** | * **Read examples 1 and 2 page 58-61** * **Attempt ex 2.8 (Questions 1,2,3,4,5,9)** | **Maximum and Minimum values** |  |
| **Ex 2.9** | * **Read ‘problem’ page 62** * **Copy examples 1 page 63 and other example 1 page 64-65** * **Attempt ex 2.9 (Questions 1,2,3,4,5,7)** | **Problems involving Maxima and Minima** |  |
| **Ex 2.10** | * **Read examples 1,2 page 68-70 *and summarise if necessary*** * **Attempt ex 2.10 (Questions 1,2,3,4,5,6,7,10,16,21,23,)** | **Further Problems involving Maxima and Minima** |  |
| **Ex 2.11** | * **Read page 75-76 *and summarise if necessary*** * **Copy all examples 77-79** * **Attempt ex 2.11 (Questions 1,2,3,4,6,8,10,12,14,16,18)** | **Primitive Functions (basic integration)** |  |
| **MathsOnline** | **Watch lessons: attempt necessary questions**  **Yr 11&12 Advanced >>**  **Calculus >> 5602, 5604, 5606, 5608, 5610, 5612, 5614, 5616, 5618** | **All concepts** |  |
| **Summary Sheet** | **Create an A4 ‘Cheat sheet’ that could be used for an exam on all ‘Calculus in Geometry ’ concepts** | **All concepts** |  |
| **Challenge Exercise** | **Attempt ‘Challenge Exercise 2’ page 83,84. Q1,2,3,4,5,6,7,8,9,14,17,19** | **All concepts** |  |
| **Past HSC Questions** | **2014 HSC Q2, 11c, 11f, Q14e** | **All concepts** |  |