

**S6 MATHEMATICS – 3 PERIODS**

**PART A**

**DATE:**  19th, December 2018

**DURATION OF THE EXAMINATION:** 45 minutes

**Total: 35 points**

**Non Calculator**



**NUMBER OF PUPILS: 9**

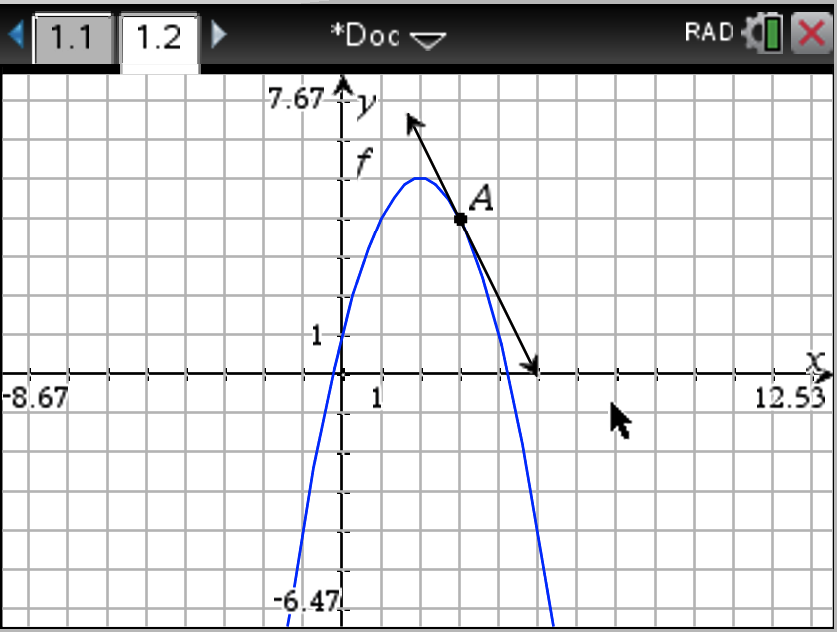
**EXERCISE 1-A:**

Differentiate the following functions.

a)

b)

**EXERCISE 2-A:**



The figure shows the graph of function .

1. From the graph find the values of

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2. Write the equation of the tangent to the graph at point A.
3. From the graph find the range of values for such that .

**EXERCISE 3-A:**

Consider the function *f* (*x*) = and its graph F.

1. Find the coordinates of the turning point of F.
2. Write the equation of the tangent to F at .
3. Find the coordinates of the intersection point of F with the line .

**EXERCICE 4-A:**

|  |  |
| --- | --- |
| The figure on the right represents the graph of a derivate function .  Choose among the graphs below the one (s) that could represent the function .  **You must justify your answer carefuly, otherwise no points will be awarded.** | Graph of function |

|  |  |
| --- | --- |
| Graph 1 | Graph 2 |
| Graph 3 | Graph 4 |
| Graph 5 | Graph 6 |