

# THINKMATH CHALLENGE 2

Student Name: \_\_\_\_\_

Class: \_\_\_\_\_

Date: \_\_\_\_\_

Mark: \_\_\_\_\_

25

Answer ALL questions.

## QUESTION 1:

Find the derivative for the following functions.

i)  $y = (3x^4)(2x + 5)$  [4 marks]

ii)  $y = 5x \cos(3x + 1)$  [4 marks]

iii)  $y = \frac{3x^2}{x + 5}$  [4 marks]

iv)  $y = \frac{(5x + 7)^4}{\sin(2x)}$  [4 marks]

## QUESTION 2:

Find second order differentiation for the following functions:

i)  $y = (2x^2 - 1)^3$  [3 marks]

ii)  $y = \sin(2x + 5)$  [3 marks]

iii)  $y = 5e^{(2x+3)}$  [3 marks]

