

Math 104 section 108 Homework week 5

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First Name: _____ Last Name: _____

Student Number: _____

Exercise 0.1. Differentiate the function $(\arcsin x)^{\arccos x}$. Assume $0 < x < 1$. (2 marks)

Exercise 0.2. Differentiate the function $y = (1 - 3x)^{\cos(x)}$. (2 marks)

Exercise 0.3. Find the tangent line at the point $(1, 1)$ for the graph of $x^2 + xy + y^2 = 3$. (3 marks)

Exercise 0.4. Find the tangent line at the point $(2, 5)$ for the graph of $2x^2 + y^2 = 33$. (3 marks)