MA 16010 Quiz 5

Lessons 13-15

23 February 2022

Problem 1. Find the **second** derivative, $f''(x)$, of

$$f(x) = 2x \ln(3x).$$

Problem 2. Use implicit differentiation to find $\frac{dy}{dx}$ at the point $(1, 0)$

$$x^2 + xy = 4$$

Problem 3. The radius of a circle is increasing at the rate of 2 cm/min. Find the rate of change of the area of the circle when $r = 4$ cm.