Worksheet: Applications of Derivatives

NIOS · Class 12 · Mathematics · 5 questions · 15 marks

Name: _____ Date: _____ Score: _____ / 15

Q1. Find two positive numbers with sum 16 and maximum product. *[3 marks]*

Q2. Find the intervals where f(x) = 2x^3 - 15x^2 + 36x + 7 is increasing or decreasing. *[3 marks]*

Q3. Find the tangent and normal to x^2 + y^2 = 25 at (3,4). *[3 marks]*

Q4. A disc's radius increases at 0.02 cm/s. Find the rate of increase of area at r = 7 cm. *[2 marks]*

Q5. Find the absolute maximum and minimum of f(x) = 2x^3 - 3x^2 - 12x + 5 on [-2, 3]. *[4 marks]*