

**MAT143 – Cálculo para Ciências Biológicas**  
**Lista de Exercícios 5 – 19/04/2007**

PROF. CLAUDIO GORODSKI

1. Calcular  $dy/dx$ :

a.  $y = (x^2 - 2)^{500}$

b.  $y = (1 - 3x)^{-1}$

c.  $y = (1 - 2x)^{-4}(x^2 - x)^2$

d.  $y = \frac{(2x - 1)^3}{(x^2 + 3)^2}$

2. Calcular  $dy/dx$ :

a.  $y = x^{5/2} - x^{3/2}$

b.  $y = \sqrt[3]{x + \sqrt{x^5}}$

c.  $y = \sqrt{\frac{x^2 - 1}{x^2 + 1}}$

3. Calcular  $dy/dx$ :

a.  $y = \cos^2 x$

b.  $y = \cos(x^2)$

c.  $y = \text{sen}(\ln x)$

d.  $y = \ln(\text{sen } x)$

e.  $y = 5\sqrt{x}$

f.  $y = e^{\sqrt{x}} + \sqrt{e^x}$

g.  $y = x \ln(\text{sen}(\ln x))$