

Higher Order Derivatives WS

- 1) Find $f'''(x)$ if $f(x) = 3x^3 - 3x^2 + x + 1 - \frac{3}{x}$
- 2) Find $f^{(4)}(x)$ if $f(x) = 2 \sin 2x$
- 3) Find $\frac{d^3 y}{dx^3}$ if $y = \ln(4x^2)$
- 4) Find $\frac{d^3 y}{dx^3}$ if $y = e^{\sin(x)}$
- 5) Find $f''(x)$ if $f(x) = \cos^{-1} x$
- 6) Find $\frac{d^2 y}{dx^2}$ if $y = x^2 \sin^2\left(\frac{2}{x}\right)$
- 7) Find $f''(x)$ if $f(x) = x e^{x^2} \ln(x)$