

Name _____ Student number _____ Quiz section: _____

1 : Simplify the following 4 expressions as much as possible: $\sqrt{\frac{1}{4}}$, $\frac{3 \ln x}{\ln(x^3)}$, $2^{2n+1}4^{-n}$, $\frac{x^2-1}{(x-1)^2}$.

2 : Write down an equation for the tangent line to the curve $y = x^2 - 1$ at the point $(2, 3)$.

3 : Find the derivatives of the following 3 functions: $f(x) = \sin(x)/x$, $(\ln x)^2$, $e^{\cos(2x)}$.

4 : Find the general form of the antiderivative of the function $f(x) = 2x^2 - 3 + \sin x$.