

**Quiz 3****Sec: 17****Name:****ID#:****Sr. No.**

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1. Differentiate the following functions and write the answers in most simplified form.

a.  $y = \frac{x^2 + 4x + 3}{\sqrt{x}}$

b.  $y = (z^2 + e^z)\sqrt{z}$

2. Find an equation of the tangent line to the curve  $y = x^4 + 1$  that is parallel to the line  $32x - y = 15$

3. Find an equation of the normal line to the curve  $y = 2xe^x$  at  $(0, 0)$