

King Fahd University of Petroleum & Minerals
Department of Mathematics & Statistics -**Math101-Term072-Quiz4-A**

Name:

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Q.1 Find the point on the curve $f(x) = \cosh(x)$ for which the tangent line is parallel to the line $y = x + 5$

Q2. If a snowball melts so that its surface area decreases at a rate of $1 \text{ cm}^2 / \text{min}$. find the rate at which the diameter decreases when the diameter is 10 cm (NOTE: $\text{Surface Area} = 4\pi r^2$)

Q3. Find the linearization $L(x)$ of the function $f(x) = \sqrt[3]{x}$, $a = -8$, and use it to approximate $\sqrt[3]{9}$