

# Quiz #6

Please print your name:

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**Problem 1. (4 points)** Compute the following derivatives.

[No need to show work.]

(a)  $\frac{d}{dx} \ln(x^3 + 7) =$

(b)  $\frac{d}{dx} [x^4 \tan^{-1}(x)] =$

**Problem 2. (6 points)** Consider the curve  $x^3 + 2y^3 = xy$ .

[Show your work!]

(a) Using implicit differentiation, determine  $\frac{dy}{dx}$ .

(b) Determine the line tangent to the curve at the point  $(1, -1)$ .