

Derivative Skills Review

Quiz Section: _____

2 POINTS EACH – NO PARTIAL CREDIT – NO CALCULATORS

1. Find $\frac{dy}{dt}$ if $y = \ln(t) \sin^{-1}(t)$

2. Let $g(y) = \frac{\tan y}{2y^3 - y}$. Compute $g'(y)$.

3. Find the slope of the tangent line to the curve $y = e^{\sqrt{x^2+3}}$ at the point $(1, e^2)$.

(over)

4. Suppose $f'(x) = 8x^3 - 5x^2 + 7$ and $f(-1) = 2$. Find a formula for $f(x)$.

5. Find the general form of the anti-derivative of the function $h(t) = \frac{5}{t} + \sec(t) \tan(t)$.