

Instructions: You may not use notes, books or calculators on this assessment. No partial credit. **Don't simplify answers.** Successful completion of this assessment is 8 of 10 completely correct. Good Luck!

1. Find $f'(x)$ if $f(x) = x^2 + \sqrt[3]{x}$

2. Find $\frac{dy}{dx}$ if $y = 2 \sin x$

3. Find $h'(t)$ for $h(t) = \sin t + e^t$

4. Find $\frac{dz}{dw}$ if $z = \ln(x) + \tan x$

5. Find $h'(t)$ for $h(t) = \sin(x^2 + \sqrt[3]{x})$.

6. Find the derivative with respect to t of $g(t) = (t^2 + \sqrt[3]{t})^2$

7. Find $\frac{dT}{dx}$ if $T = e^x(x^2 + \sqrt[3]{x})$

8. Find $r'(y)$ if $r(y) = \ln(2y + 4)$

9. Find the derivative with respect to w of $f(w) = 2^w + w^2$

10. Find $\frac{dy}{dx}$ if $y = \sqrt{x^2 + a^2}$, where a is a constant.