

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 $f(x) = 4x^5 + \frac{1}{\sqrt{x^3}}$

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

3. Find $h'(t)$ for $h(t) = \cos(\sin t)$

4. Find $\frac{dz}{dw}$ if $z = (1/w + w^3)^5$

5. Find $h'(t)$ for $h(t) = \ln(t + \cos t)$.

6. Find the derivative with respect to t of $g(t) = (1 + \sqrt{t})^2$

7. Find $\frac{dT}{dx}$ if $T = \ln(2x)(x^2 + 2^x)$

8. Find $r'(y)$ if $r(y) = e^{2y+4}$

9. Find the derivative with respect to w of $f(w) = \frac{w+1}{w} + e^{w+1} + (w+1)^e$

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