Date: **Calculus I**   Name:

Section: **Derivative Gateway Quiz** (version #61)   ID:

Evaluate each expression. Calculators are **not** allowed.
At least 9 must be correct for any credit. Allowed time: 10 minutes.

1. $\frac{d}{dt}\left(\frac{t+5}{t^2+2}\right) =$
(write as a fraction with simplified numerator)

2. $\frac{d}{dx}\left(\ln\left(\cos(4x)\right)\right) =$

3. $\frac{d}{dr}\left(8\sin(-5r)\right) =$

4. $\frac{d}{dy}\left(3\ln(3y)\right) =$

5. $\frac{d}{dt}\left(\tan^{-1}(5t)\right) =$

6. $\frac{d}{dx}\left(4\tan(4x)\right) =$

7. $\frac{d}{dx}(7x^3 - 5x^2 + 4x + 4) =$

8. $\frac{d}{dx}\left(5\cos(4x)\right) =$

9. $\frac{d}{ds}\left(e^s\sin(5s)\right) =$

10. $\frac{d}{dx}(-2e^{7x}) =$