

# MTH 1126 - Test #1 - Solutions

SPRING 2017

Pat Rossi

Name \_\_\_\_\_

Show **CLEARLY** how you arrive at your answers

1. Compute:  $\int \frac{x^2}{(4x^3-5)^5} dx =$

2. Compute:  $\int \frac{x^2}{(4x^3-5)} dx =$

3. Compute:  $\frac{d}{dx} \left[ e^{(4x^5+5x^4)} \right] =$

4. Compute:  $\frac{d}{dx} \left[ \ln \left( \sqrt{\frac{4x^2-2x}{2x^2+1}} \right) \right] =$

5. Compute:  $\int e^{(5x^2+4)} x dx =$

6. Compute:  $\frac{d}{dx} [\operatorname{arcsec}(2x)] =$

7. Compute:  $\int \frac{1}{\sqrt{16-4x^2}} dx =$

8. Compute:  $\frac{d}{dx} [\arccos(x^3)] =$

9. Compute:  $\int \frac{1}{9+7x^2} x dx =$

10.  $z = \tan(\arccos(4x))$  Re-write this equation as an equivalent algebraic equation.

**Extra: Wow! 10 points (All or nothing)**

Compute:  $\int \frac{1}{e^{-x}+e^x} dx =$