

Name: _____

MA 2320 Quiz 1

1. Compute the following derivatives.

(a) $\frac{d}{dx} \left[3x^3 - e^{x^2+1} + \frac{5}{x} \right]$

(b) $\frac{d}{dx} \left[\sqrt{e^x - \ln(x)} \right]$

(c) $\frac{d}{dx} \left[e^{x^2+1} \tan(3x-1) \right]$

2. Compute the following (without a calculator).

(a) $\cos(\pi/2)$

(b) $\sin(\pi/3)$

(c) $\tan(7\pi/3)$

(d) $\sec(7\pi/4)$

(e) $\arccos(1)$

(f) $\arccos(\sqrt{2}/2)$ in the range $[0, 2\pi]$

3. Do the following:

(a) Compute the Riemann sum approximation of $\int_1^3 2x^2 + 1$ with $n = 3$.

(b) Compute $\int_1^3 2x^2 + 1$ by using the definition of the integral.