MATH 152 Honors Fall 2015 QUIZ 1

Name: _____ **Section:** 201 (starts at 08:00)
202 (starts at 09:35)

Justify your answers.

1. (3 points) Find the derivative:

$$\frac{d}{dx}\int_{2x}^{3x} e^{t^2}\,dt = \underline{\hspace{3cm}}$$

2. (2 points) Let $f(t) = \arcsin(x)$. Compute the integral:

$$\int_0^1 f'(t)dt = \underline{\hspace{3cm}}$$

3. (2 points) Evaluate:

$$\int_1^4 e^x \cos(e^x)dx = \underline{\hspace{3cm}}$$

4. (3 points) Find the area of the region bounded by the curves $y = \sin(x)$, $y = \cos(x)$ and lines $x = 0$, $x = \pi$.

Answer: _____