Name ____________________________

- Show sufficient work to justify each answer.
- No calculators, notes, books, etc allowed.
- This quiz has 4 questions. You have 15 minutes for this quiz.

1. **(3 points)** Evaluate
   \[ \int \csc^2(4 \sin(4\theta)) \cos(4\theta) \, d\theta \]

2. **(3 points)** Evaluate
   \[ \int_{1}^{2} \frac{e^{6/x}}{x^2} \, dx \]
3. Consider the region $R$ bounded by $y = 1$, $y = 2$, and $y = x^2$. Set up, but do not evaluate, definite integrals which represent the area of $R$, in each of the following manners. Use proper notation. Your answers to (a) and (b) should have different integrands.

(a) **(2 points)** Integrate with respect to $x$.

(b) **(2 points)** Integrate with respect to $y$. 