

QUIZ 1 - MATH 152

Friday, September 2

YOUR NAME: _____

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Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Use substitution to evaluate $\int \frac{15x^4 + 6x}{(x^5 + x^2)^3} dx$.

2. Recall that we showed in class that $(\sin^{-1} x)' = \frac{1}{\sqrt{1-x^2}}$. Use this to calculate the integral:

$$\int \frac{dx}{\sqrt{4-25x^2}}.$$

3. **(Bonus Problem)** Calculate the integral

$$\int (\cot x) \ln (\sin x) dx.$$