

Name: _____

1. Evaluate $\int \ln(3x + 2) dx$.

15 pts

2. Evaluate $\int \sin^3 x \sqrt{\cos x} dx$.

15 pts

(OVER)

3. Evaluate $\int \frac{dx}{\sqrt{9x^2 + 6x - 8}}$. (Hint: You can avoid a trig substitution and write your final answer in terms of an inverse hyperbolic function.)

14 pts

4. Evaluate $\int \frac{du}{(u^2 + 2)^2}$. (Hint: Use a trig substitution.)

15 pts

5. Evaluate $\int \frac{2x - 1}{x^2 + 4} dx$.

14 pts

6. Evaluate the integral $\int_0^3 \frac{dx}{x^2 - x - 2}$, or show that it is divergent.

15 pts

(OVER)

