

Show all work to receive full credit. **Form a group of FIVE students.**

1. Evaluate  $\int_2^3 \frac{3x - 5x^2}{(3x - 1)(x - 1)^2} dx$ . Round answer to 5 decimals.

2. Approximate the integral from (1) using the following methods with  $n = 4$ . Identify  $\Delta x$ ,  $x_0, x_1, x_2, x_3, x_4$ , and write out the formula used. Round final answers to 5 decimals.

(a) Prep Area for  $\Delta x, x_0, x_1, x_2, x_3, x_4$  and  $f(x_0), f(x_1), \dots, f(x_4)$ .

(b) Lefthand Method

(c) Righthand Method

(d) Trapezoid Method

(e) Simpson's Method