

Name: _____

- No electronic devices are allowed. You must show your work to obtain credit.
- You may use the back if necessary. Please indicate clearly if you do so.

1. (5 points) Calculate the double integral

$$\iint_R \frac{1}{1+x+y} dA, \quad R = \{(x, y) \mid 1 \leq x \leq 2, 1 \leq y \leq 3\}.$$

2. (5 points) Find the point on the plane $x + y - z = 1$ closest to the point $(1, 0, 1)$. (Possible hint: the Lagrange multipliers method with distance function² between 2 points)