

Please show **all** your work! Answers without supporting work will not be given credit.

Clearly mention what theorem(s), if any, you are using.

Write answers in space provided. Use the backside if needed.

You have 15 minutes to complete this Quiz.

You can get MAXIMUM $(7 + 8) = 15$ marks.

Name:

Calculate the following double integrals.

1.

$$\iint_{\Omega} x \sin(x + y) dA$$

where $\Omega = [0, \pi/6] \times [0, \pi/3]$.

2.

$$\iint_{\Omega} e^{-y^2} dA$$

where $\Omega = \{(x, y) \mid 0 \leq y \leq 3, 0 \leq x \leq y\}$.