

**Time Limit:** 6 minutes

**Instructions:** Calculator allowed. Closed book. Closed notes.

Instructions for all quizzes: Do not discuss any aspect of this quiz with other midshipmen until after 6th period.

Print your last name above. Also, fill in the bubble for your section.

Fill the bubble for the correct answer. Also, write your answers in any blanks provided.

Your work will not be graded unless the instructions request you show your work.

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Throughout this quiz we consider the double integral

$$\int_0^1 \int_x^1 \sin(y^2) dy dx.$$

1. Which choice describes the region of integration best?

- distorted sine curve
- square
- rectangle (not a square)
- right triangle
- non-right triangle See p. 970, Example 5, Figures 15 and 16.

2. Rewrite the integral with the order of integration reversed.

$$\int_0^1 \int_x^1 \sin(y^2) dy dx = \int_{\underline{0}}^{\underline{1}} \int_{\underline{0}}^{\underline{y}} \underline{\sin(y^2)} dx dy$$

3. Evaluate the integral.

- $(1 - \cos(1))/2$
- $\cos(1)$
- $-\cos(1)$
- $\cos(1)/2$
- $\sin(1)$
- none of above; correct is \_\_\_\_\_

**Reason:** See text, p. 970, Example 5.