

"QUIZ" for Lecture 16

NAME: (print!) _____

Joe Barr

Section: _____

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E-MAIL SCANNED .pdf OF COMPLETED QUIZ to DrZcalc3@gmail.com (Attachment: q16FirstLast.pdf) ASAP BUT NO LATER THAN Nov. 2, 8:00pm

1. Compute the Jacobian of the transformation

$$\Phi(r, s) = (rs, r + s)$$

$$\begin{array}{l} r: s \quad | \\ s: r \quad | \end{array} \quad \begin{array}{l} s \quad r \\ | \quad | \end{array} = s - r$$

2. Let $D = \Phi(\mathcal{R})$ where $\Phi(u, v) = (u + v, v^2)$ and $R = [0, 6] \times [1, 2]$. Calculate

$$\iint_D y \, dA \quad .$$

(Note: it is not necessary to compute D).

$$0 < u < 6$$

$$1 < v < 2$$