

"QUIZ" for Lecture 16

NAME: (print!) Angelica Armstrong Section: 3

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

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

$$\begin{array}{l} r: \quad s \quad | \quad s \quad r \\ s: \quad r \quad | \quad 1 \quad 1 \end{array} = s - r$$

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

$$\iint_{\mathcal{D}} y \, dA \quad .$$

(Note: it is not necessary to compute \mathcal{D}).

$$\begin{array}{l} 0 < u < 6 \\ 1 < v < 2 \end{array}$$