

“QUIZ” for Lecture 18

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NAME: (print!) _____

All

Section: _____

E-MAIL SCANNED .pdf OF COMPLETED QUIZ to DrZcalc3@gmail.com (Attachment: q18FirstLast.pdf) ASAP BUT NO LATER THAN Nov. 9, 8:00pm

1. Let C be the line segment from $(0, 1)$ to $(2, 3)$, find $\int_C xy \, ds$.

$(0, 1) + t(2, 2)$
 $(2t, 1+2t)$
 $x=2t \quad y=1+2t$
 $dx=2dt \quad dy=2dt$
 $\sqrt{4+4}=2\sqrt{2}$
 $\int 2t \cdot (1+2t) \cdot 2\sqrt{2} \, dt, \quad t=0..1$
 $=6.59966$

2. Evaluate

$$\int_C xy^2 \, dx + x^2y \, dy,$$

where C is $x = t^2, y = t^3, 0 \leq t \leq 1$.

$dx=2t \, dt \quad dy=3t^2 \, dt$
 $\int t^2 \cdot t^6 \cdot 2 \, dt + t^4 \cdot t^3 \cdot 3t^2 \, dt, \quad t=0..1$
 $=1/2$