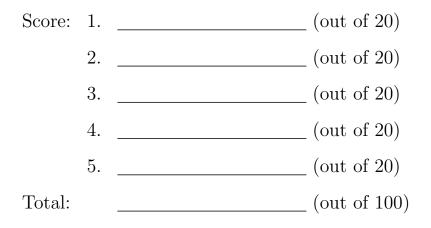
Quiz 3 – MA 225 B2 – Spring 2011

Instructor:	Margaret Beck
TF:	Man-Ho Ho
Date:	April 27, 2011

Name:			
BU ID:			



$$\int_C x^2 y z \mathrm{d}s$$

where C is the line segment from (0, 2, 3) to (1, 6, 4).

Question 2 [20 points] Set up, but do not evaluate, a triple integral representing the volume of the solid bounded by the surfaces $y = -x^2$, z = -1, z = 1, and y = -4.

Question 3 [20 points] Evaluate $\int_C \mathbf{F} \cdot d\mathbf{r}$, where $\mathbf{F} = \langle y + \sin x - \ln(x^2 + y^2), 2 \tan^{-1}(y/x) \rangle$ and C is the circle centered at (2, -1) with radius 2.

Question 4 [20 points] Show that the integral

$$\int_C e^y \mathrm{d}x + (1 + xe^y) \mathrm{d}y$$

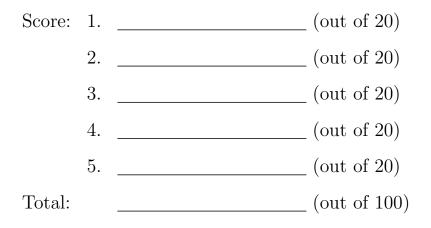
$$\iint_R \frac{x+y}{x-y} \mathrm{d}A$$

where R is the square with vertices (0, 2), (-1, 3), (-1, 1), and (-2, 2).

Quiz 3 – MA 225 B3 – Spring 2011

Instructor:	Margaret Beck
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Date:	April 27, 2011

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$$\int_C x^2 y z \mathrm{d}s$$

where C is the line segment from (0, 2, 3) to (1, 6, 4).

Question 2 [20 points] Set up, but do not evaluate, a triple integral representing the volume of the solid bounded by the surfaces $y = -x^2$, z = -1, z = 1, and y = -4.

Question 3 [20 points] Evaluate $\int_C \mathbf{F} \cdot d\mathbf{r}$, where $\mathbf{F} = \langle y + \sin x - \ln(x^2 + y^2), 2 \tan^{-1}(y/x) \rangle$ and C is the circle centered at (2, -1) with radius 2.

Question 4 [20 points] Show that the integral

$$\int_C e^y \mathrm{d}x + (1 + xe^y) \mathrm{d}y$$

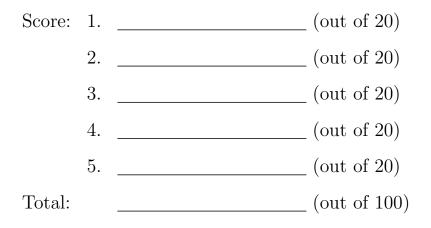
$$\iint_R \frac{x+y}{x-y} \mathrm{d}A$$

where R is the square with vertices (0, 2), (-1, 3), (-1, 1), and (-2, 2).

Quiz 3 – MA 225 B4 – Spring 2011

Instructor:	Margaret Beck
TF:	Man-Ho Ho
Date:	April 28, 2011

Name:			
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$$\int_C xyz^2 \mathrm{d}s$$

where C is the line segment from (-1, 5, 0) to (1, 6, 4).

Question 2 [20 points] Set up, but do not evaluate, a triple integral representing the volume of the solid bounded by the surfaces $y = x^2$, z = 0, z = 4, and y = 9.

Question 3 [20 points] Evaluate $\int_C \mathbf{F} \cdot d\mathbf{r}$, where $\mathbf{F} = \langle y + \sin x - \ln(x^2 + y^2), 2 \tan^{-1}(y/x) \rangle$ and C is the circle centered at (-1, 3) with radius 3.

Question 4 [20 points] Show that the integral

$$\int_C (1 - ye^{-x}) \mathrm{d}x + e^{-x} \mathrm{d}y$$

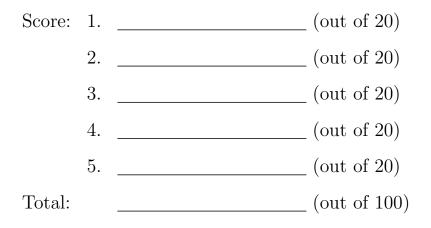
$$\iint_R \frac{x-y}{x+y} \mathrm{d}A$$

where R is the square with vertices (0, 2), (1, 1), (2, 2), and (1, 3).

Quiz 3 – MA 225 B5 – Spring 2011

Instructor:	Margaret Beck
TF:	Man-Ho Ho
Date:	April 28, 2011

Name:			
BU ID:			



$$\int_C xyz^2 \mathrm{d}s$$

where C is the line segment from (-1, 5, 0) to (1, 6, 4).

Question 2 [20 points] Set up, but do not evaluate, a triple integral representing the volume of the solid bounded by the surfaces $y = x^2$, z = 0, z = 4, and y = 9.

Question 3 [20 points] Evaluate $\int_C \mathbf{F} \cdot d\mathbf{r}$, where $\mathbf{F} = \langle y + \sin x - \ln(x^2 + y^2), 2 \tan^{-1}(y/x) \rangle$ and C is the circle centered at (-1, 3) with radius 3.

Question 4 [20 points] Show that the integral

$$\int_C (1 - ye^{-x}) \mathrm{d}x + e^{-x} \mathrm{d}y$$

$$\iint_R \frac{x-y}{x+y} \mathrm{d}A$$

where R is the square with vertices (0, 2), (1, 1), (2, 2), and (1, 3).