

Taker Name:

GTID: 90

Section:

Grader #1:

GTID: 90

§16.3: FToLI and Potential Functions

Find a potential function for $\mathbf{F} = \langle P, Q, R \rangle$ and use FToLI to evaluate the line integral over the curve C parametrized by $\mathbf{r}(t)$, $t \in [0, 1]$.

$$\int_C \mathbf{F} \cdot T \, ds = \int_C 2 \cos y \, dx + \left(\frac{1}{y} - 2x \sin y \right) dy + \frac{1}{z} dz,$$

where $\mathbf{r}(0) = (0, 2, 1)$, $\mathbf{r}(1) = (1, \pi/2, 2)$.

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G2:

A**J****N**

G3:

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