



Q.1 Evaluate the line integral  $\int_C (xy + z^3) ds$  from  $(1, 0, 0)$  to  $(-1, 0, \pi)$  along the helix  $C$  (see Figure 1) that is represented by the parametric equations

$$x(t) = \cos t, \quad y(t) = \sin t, \quad z = t, \quad (0 \leq t \leq \pi).$$

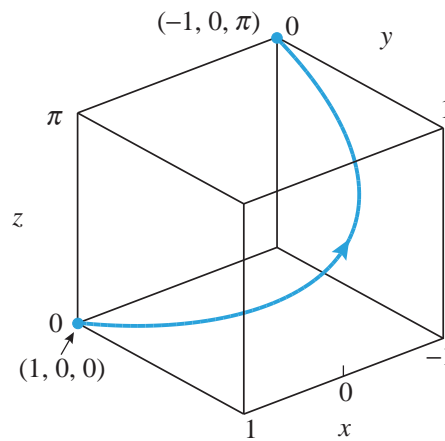


Figure 1: Helix  $C$ .

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“Your problem isnt the problem, its your attitude about the problem.” — Ann Brashares.