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Q25

1.) Ans: 0

because

$$\operatorname{div}(\operatorname{curl}(F)) = 0$$

2.)  $\operatorname{div}(F) = 2 + 2 + 2 = 6$

$$D = \{(x, y, z) \mid 0 \leq x \leq 1, \\ 0 \leq y \leq 4, 0 \leq z \leq 5\}$$

$$\int_0^5 \int_0^4 \int_0^1 6 \, dx \, dy \, dz = 6 \cdot 4 \cdot 5 = 12$$