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[> restart : with(LinearAlgebra) : with(VectorCalculus) :
[> SetCoordinates(cartesian[x,y,z]) :
[> # First define n_k = normaal vector met rechterhand
[> v_1 := VectorField([-u·sin(u) + cos(u), sin(u) + u·cos(u), 0]) :
[> v_2 := VectorField([0, 0, 1]) :
[> n := CrossProduct(v_1, v_2)
      
$$n := (\sin(u) + u \cos(u))\bar{e}_x + (u \sin(u) - \cos(u))\bar{e}_y + (0)\bar{e}_z \quad (1)$$

[> # Nu grad x F
[> F := VectorField([0, -z, y]) :
[> curl := Curl(F)
      
$$curl := (2)\bar{e}_x + (0)\bar{e}_y + (0)\bar{e}_z \quad (2)$$

[> # Dus
[> int(int(DotProduct(curl, n), v = 0..u), u = 0.. $\frac{\text{Pi}}{2}$ )
      
$$-2 + \frac{\pi^2}{2} \quad (3)$$

[> # et voila
[>

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