```
> restart : with(LinearAlgebra) : with(plots) : with(plottools) : with(inttrans) :
      with(VectorCalculus) : SetCoordinates('cartesian'[x, y, z]) :
> u := x^3 - y^3 :
> v := VectorField([1, 1 , 1]) :
> F := u * v
```

$$F := \begin{bmatrix} x^3 - y^3 \\ x^3 - y^3 \\ x^3 - y^3 \end{bmatrix} \tag{1}$$

```
> F := subs(x = cos(t), y = sin(t), F)
```

$$F := \begin{bmatrix} \cos(t)^3 - \sin(t)^3 \\ \cos(t)^3 - \sin(t)^3 \\ \cos(t)^3 - \sin(t)^3 \end{bmatrix} \tag{2}$$

```
> dx := VectorField([-sin(t), cos(t), 0]) :
> int(F * dx, t = 0..2*Pi)
```

$$\frac{3\pi}{2} \tag{3}$$

```
>
```