divergence.
div
$$F = \nabla \cdot F = \frac{\partial P}{\partial x} + \frac{\partial P}{\partial y} + \frac{\partial R}{\partial z}$$

if $F = \nabla f$
div $F = \nabla \cdot \nabla f = \frac{\partial F}{\partial x} + \frac{\partial F}{\partial y^2} + \frac{\partial F}{\partial z^2}$

Find the divergence of the given function. $\mathbf{F}(x, y, z) = \cos xz \, \mathbf{j} - \sin xy \, \mathbf{k}$ $\mathbf{d} \cdot \mathbf{v} \, \mathbf{F} = \mathbf{O}.$





Determine whether or not the vector field is conservative. If it is conservative, find a function f

$$\mathbf{F}(x, y, z) = y \cos xy \,\mathbf{i} + x \cos xy \,\mathbf{j} - \sin z \,\mathbf{k}$$