(EXAMPLE) [B-1-1]

Determine the following vector relations:

$\nabla \times (\nabla \phi) =$

$\nabla \times \left(\nabla \times \vec{A}\right) =$

Determine also the following vector relations:

$\nabla(\phi\psi) =$

$\nabla \cdot \left(\phi \vec{A}\right) =$

$\nabla \times \left(\phi \vec{A}\right) =$

(Note)

$\phi, \psi =$ scalar quantities

$\vec{A} =$ vector quantity