$$\nabla P(x, y, z) = \left(\frac{\partial P(x, y, z)}{\partial x}, \frac{\partial P(x, y, z)}{\partial y}, \frac{\partial P(x, y, z)}{\partial z} \right)$$

$$\nabla^2 P(x, y, z) = \frac{\partial^2 P(x, y, z)}{\partial x^2} + \frac{\partial^2 P(x, y, z)}{\partial y^2} + \frac{\partial^2 P(x, y, z)}{\partial z^2}$$

$$\frac{\partial P(x)}{\partial x} = \lim_{\Delta x \to 0} \left[\frac{P(x + \Delta x) - P(x)}{\Delta x} \right]$$

$$\frac{\partial P(x)}{\partial x} \approx \mathbf{D}_x P(x) = \frac{P(x + \Delta x) - P(x)}{\Delta x}$$

$$\frac{\partial^2 P(x)}{\partial x^2} \approx \mathbf{D}_x \mathbf{D}_x P(x) = \frac{\mathbf{D}_x P(x + \Delta x) - \mathbf{D}_x P(x)}{\Delta x}$$

$$\frac{\partial^2 P(x)}{\partial x^2} \approx \mathbf{D}_x{}^2 P(x) = \frac{P(x + \Delta x) - 2P(x) + P(x - \Delta x)}{\Delta x^2}$$