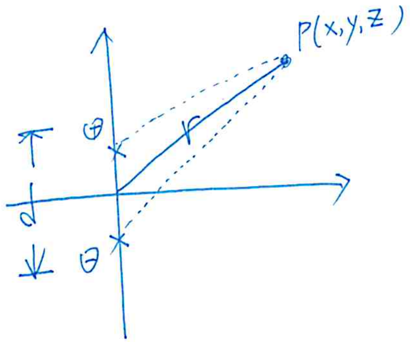

這种作法的近似
在這個步驟產生

at P, $\phi_+ = \dfrac{1}{4\pi\epsilon_0}\dfrac{q}{r} + \nabla\left(\dfrac{q}{4\pi\epsilon_0 r}\right)\cdot\left(-\hat{a}_z\dfrac{d}{2}\right)$

$$\phi_- = \frac{1}{4\pi\epsilon_0}\frac{-q}{r} + \nabla\left(\frac{-q}{4\pi\epsilon_0 r}\right)\cdot\left(\hat{a}_z\frac{d}{2}\right)$$

$$\phi(P) = \phi_+ + \phi_-$$

$$= -\nabla\left(\frac{q}{4\pi\epsilon_0 r}\right)\cdot\left(\hat{a}_z\frac{d}{\cancel{2}}\right)$$

$$= \frac{-q}{4\pi\epsilon_0}\nabla\left(\frac{1}{r}\right)\cdot\left(\hat{a}_z d\right)$$

$$= \frac{-q}{4\pi\epsilon_0}\times\frac{-\hat{a}_r}{r^2}\cdot\hat{a}_z d$$

$$= \frac{qd\,\hat{a}_z\cdot\hat{a}_r}{4\pi\epsilon_0 r^2} = \frac{\vec{p}\cdot\hat{a}_r}{4\pi\epsilon_0 r^2}\ \cancel{\text{also}}\ \text{or}\ \frac{qd\cos\theta}{4\pi\epsilon_0 r^2}$$