

# Electric Potential and Electric Field in One Dimension (1)



For given electric potential  $V(x)$  find the electric field

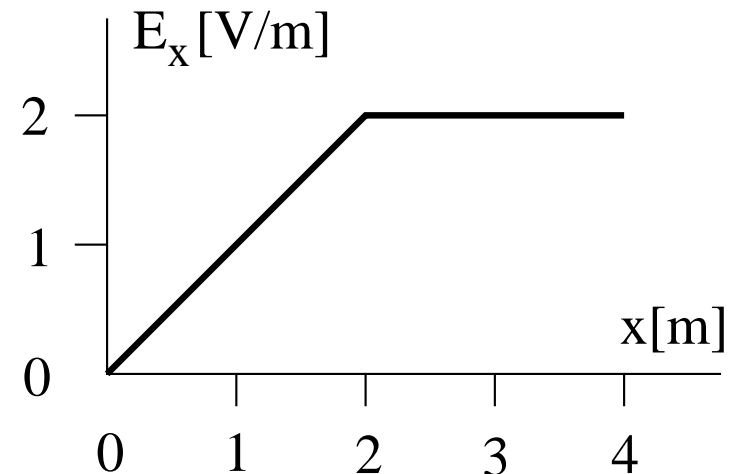
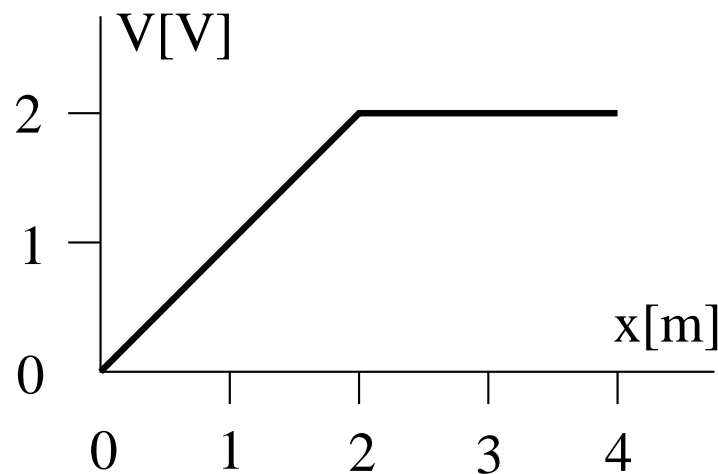
(a)  $E_x(1\text{m})$ ,

(b)  $E_x(3\text{m})$ .

For given electric field  $E_x(x)$  and given reference potential potential  $V(0) = 0$  find the electric potential

(c)  $V(2\text{m})$ ,

(d)  $V(4\text{m})$ .



## Electric Potential and Electric Field in One Dimension (2)



For given electric potential  $V(x)$  find the electric field

- (a)  $E_x(0.5\text{m})$ ,      (b)  $E_x(1.5\text{m})$ ,  
(c)  $E_x(2.5\text{m})$ ,      (d)  $E_x(3.5\text{m})$ .

For given electric field  $E_x(x)$  and given reference potential potential  $V(0) = 0$  find the electric potential

- (e)  $V(1\text{m})$ ,      (f)  $V(2\text{m})$ ,      (g)  $V(4\text{m})$ .

