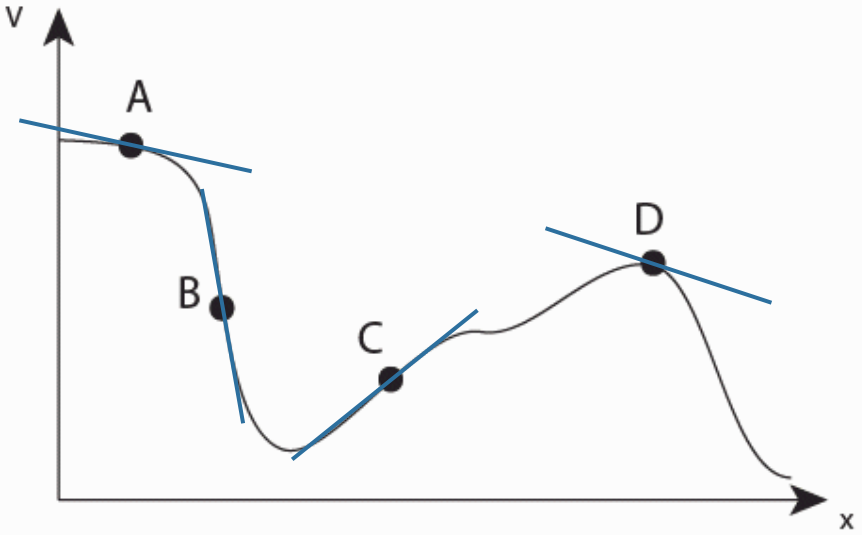
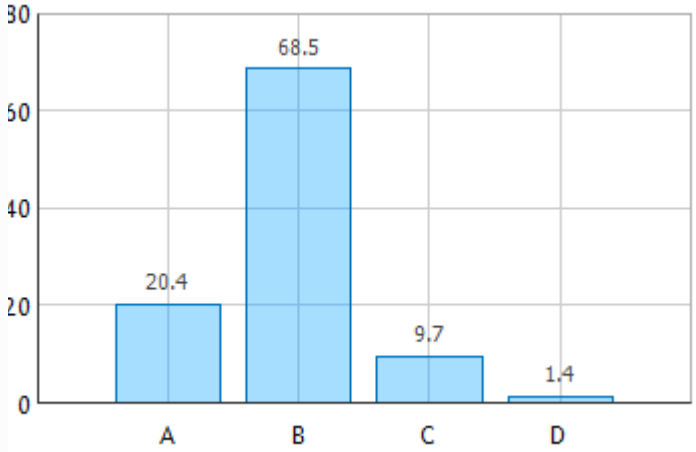
CheckPoint 1a

2) The electric potential in a certain region is plotted in the following graph





At which point is the magnitude of the electric field greatest?

"A) higher electric potential indicates higher magnitude electric field"

"B) B has the steepest slope so the electrical potential is decreasing the fastest."

"C) Since voltage is the result of integrating the electric field, E will be the greatest when the slope has the largest positive slope, which is point c"

How do we get E from V?

$$\vec{E} = -\vec{\nabla} V \quad \rightarrow \quad E_x = -\frac{\partial V}{dx} \quad \rightarrow \quad \text{Look at slopes!}$$