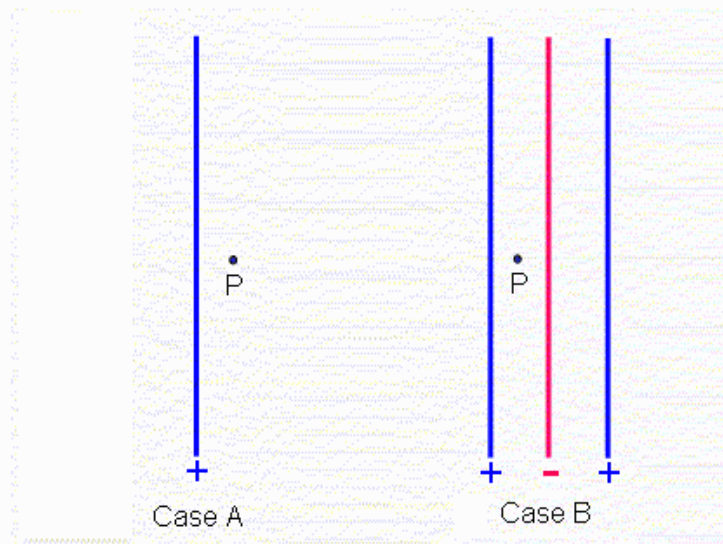


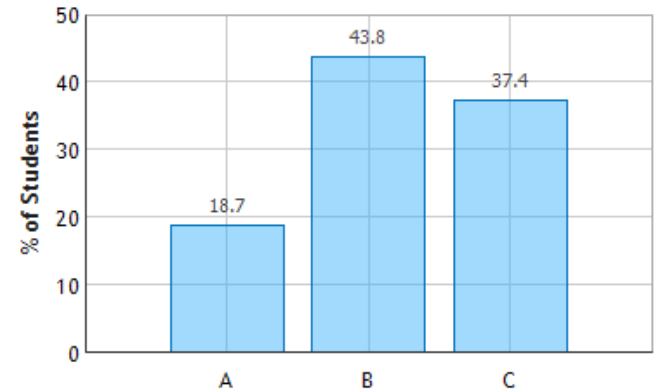
# CheckPoint 4



10) In both cases shown below, the colored lines represent positive (blue) and negative (red) charged planes. The magnitudes of the charge per unit area on each plane is the same.



Infinite Sheets of Charge: Question 1 (N = 860)



In which case is  $E$  at point  $P$  the biggest?

- A) A      B) B      C) the same

“The electric field in case B is zero, and the electric field in case A is nonzero.”

“The first positive and negatively charged planes in case B both have fields pointing to the right. These are the strongest fields because they’re closest to the point P. The rightmost positive field will point to the left, but this will be weaker than either of the two fields pointing to the right, giving an overall greater field magnitude in case B.”

“If you superposition the electric fields, they cancel out in case B so the electric field is the same in both cases.”