Question 1

A point particle, named Zog, has charge $+16\,\mathrm{C}$ and is in the vicinity of another point charged particle. Consider the following statements:

A) Zog *definitely* exerts a force of $16\,\mathrm{N}$ but the force Zog feels could be of another size.

B) Zog *definitely* feels a force of $16\,\mathrm{N}$ but the force Zog exerts could be of another size.

C) Zog *definitely* exerts a force of $16\,\mathrm{N}$ and *definitely* feels a force of $16\,\mathrm{N}$.

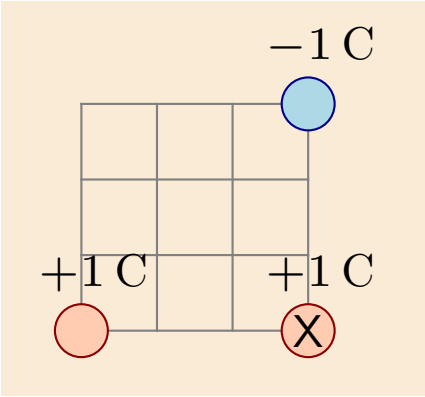
Which of the statements are true?

1. Only A.
2. Only B.
3. Only C.
4. None of them.

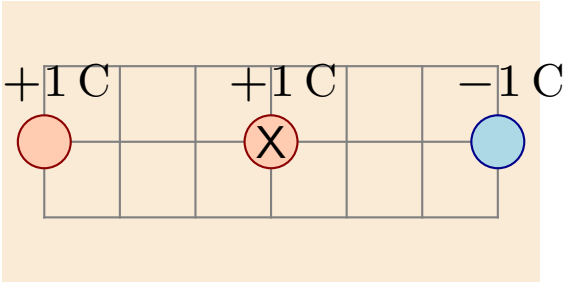
Question 2

In which of the following is the magnitude of the net electrostatic force exerted on X largest?

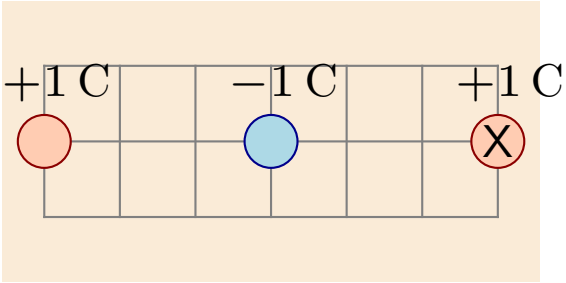
1.



2.



3.



Warm Up Question 1

Source charges are placed on two differently sized balls, which are separated. The charges are held fixed. Zog places a positively charged probe at the point midway between the balls and then removes it. Geraldine places a negatively charged probe at the point midway between the balls and then removes it. Is there any difference between the electric field (produced by the fixed balls) when Zog's probe charge is present compared to when Geraldine's is present? Explain your answer.

1. Yes. Electric fields depend on the charges.
2. Yes. The probes move or deflect the electric field lines depending on their charges.
3. Yes. There will be different polarization of the balls for the different probes.
4. No. The two probes will rearrange the charges on the balls but these will cancel.
5. No. The electric field is created by the sources only.

Warm Up Question 2

Go to the Phys 132 course website (not D2L). Look in the navigation bar on the left or at the top and click "Course Materials". This will open a new page with a day-by-day listing of the course activities. Click on the link for the "Slides 2" on 25 January. You should see the quiz questions that were covered in the class and one more that was not covered in class. Now answer that last question.