

Question 1

Particle A has charge 8.0 C and particle B has charge 5.0 C . In one experiment A is placed in the vicinity of a third particle, C. In another experiment B is placed in the vicinity of C, but not necessarily at the same location as A had been.

Which of the following is true?

1. You can say that the force exerted by A on C is *definitely* larger than that exerted by B on C.
2. You can say that the force exerted by B on C is *definitely* larger than that exerted by A on C.
3. You cannot say for certain that the force exerted by A on C is *definitely* larger or *definitely* smaller than that exerted by B on C.

Warm Up Question 1

Two identical point charges are separated by a distance of 3 mm. The separation is increased to 6 mm. Explain as precisely as possible how the magnitude of the force after the separation is increased is related to the magnitude before the separation is increased.

1. Decreases. Distance is larger.
2. Reduces to $1/4$ of original. Varies as inverse square of distance.
3. Increases to 4 times the original. Distance is squared.
4. Increases. Distance is larger.

Question 2

Three charges are aligned as illustrated.

+2 C



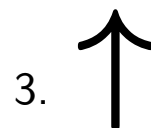
-2 C



-4 C



Which of the following gives the direction of the net force exerted on the charge at the right?

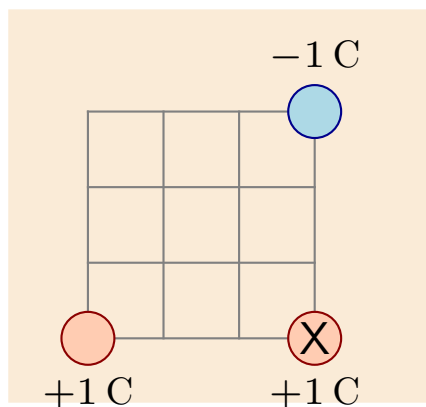


5. Zero net force.

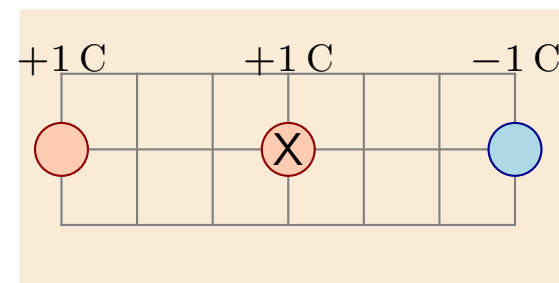
Question 3

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

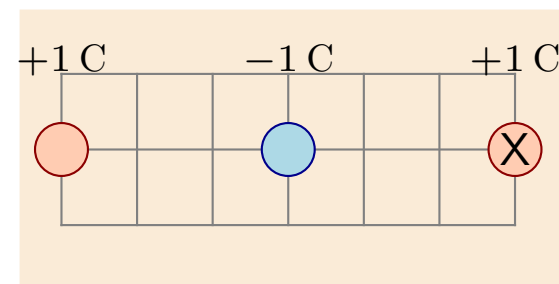
1.



2.



3.



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 1" on Monday, August 17. You should see the quiz questions that were covered in the class and one more at the very end that was not covered in class. Now answer that last question.