

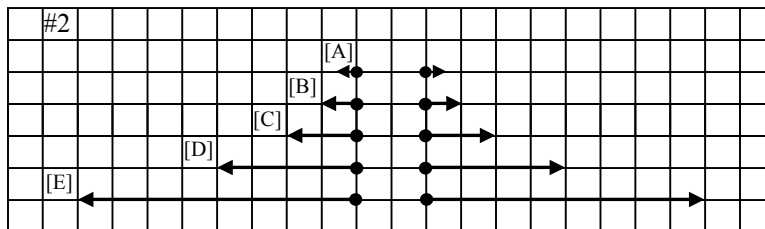
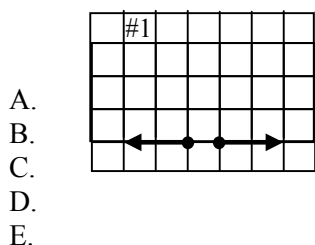
Physics 112
Quiz #11
October 6, 2000

Name: _____

IF YOU WANT A QUESTION GRADED OUT OF THREE POINTS (-1 [MINUS ONE] FOR WRONG ANSWER!!) WRITE "3" IN SPACE PROVIDED ON EACH QUESTION.

1. When two identical, isolated charges are separated by two centimeters, the magnitude of the force exerted by each charge on the other is eight newtons. If the charges are moved to a separation of eight centimeters, what will be the magnitude of that force now?
- A. one-half of a newton
 B. two newtons
 C. eight newtons
 D. thirty-two newtons
 E. one hundred twenty-eight newtons
- Grade out of three? Write "3" here:* _____

2. Figure #1 shows two identical, isolated charges separated by a certain distance. The arrows indicate the forces exerted by each charge on the other. The same charges are shown in Figure #2. Which diagram in Figure #2 would be correct?



Grade out of three? Write "3" here: _____

3. Isolated charges q_1 and q_2 are separated by distance r , and each exerts force F on the other. $q_1^{initial} = q_1^{final}$ and $q_2^{initial} = q_2^{final}$; $r^{initial} = 10m$; $r^{final} = 2m$. $F^{initial} = 25N$; $F^{final} = ?$
- A. 1 N
 B. 5 N
 C. 25 N
 D. 125 N
 E. 625 N
- Grade out of three? Write "3" here:* _____

4. Graph #1 refers to the initial and final separation between two identical, isolated charges. Graph #2 refers to the initial and final forces exerted by each charge on the other. Which bar is correct?

Grade out of three? Write "3" here: _____

