Pairs of Charges—Attractive and Repulsive Force 137

The following diagrams show three separate pairs of point charges. The pairs only interact with each other since they are far apart.

Rank the force on each point charge from most attractive to most repulsive.



$$C = +2$$
 q $D = -2$ q

$$E=+3 \quad q \qquad F=+3 \quad q$$

Highest 1_____ 2____ 3____ 4____ 5____ 6___ Lowest

Or, all of these charges experience the same force. _____

Please carefully explain your reasoning.

How sure were you of your ranking? (circle one)

Basically Guessed Sure Very Sure
1 2 3 4 5 6 7 8 9 10

¹³⁷ B. Emerson