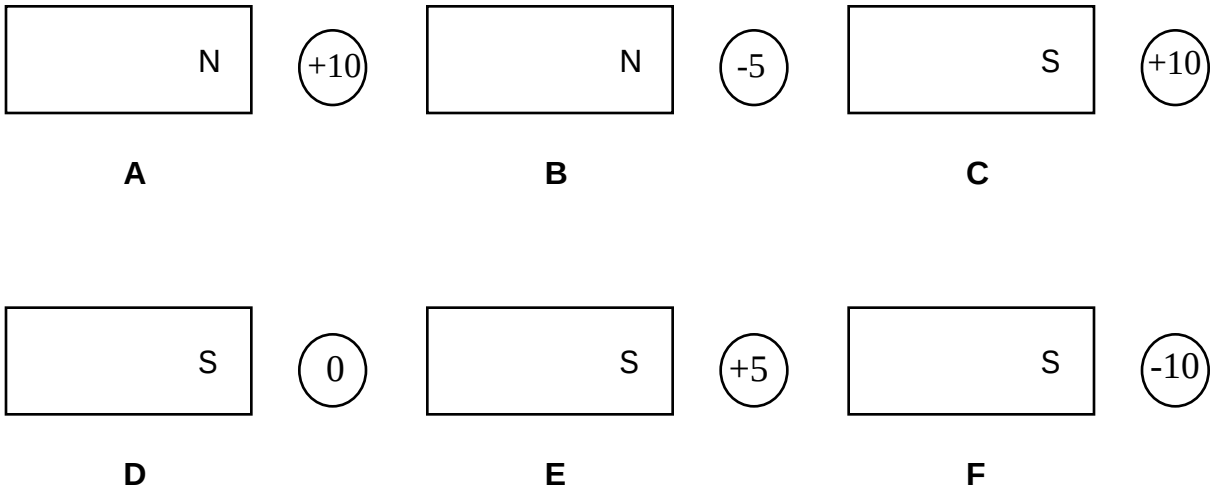
Charges Near Magnets—Magnetic Force[184]

The figures below show electrically charged particles sitting at rest near the poles of permanent magnets. All of the permanent magnets are the same strength. The magnitudes and signs of the electric charges are shown in the circles, which represent the particles. The zero values indicate that the particle is actually electrically neutral.

Rank these situations, from strongest attraction to strongest repulsion, on the basis of the magnetic force exerted by the magnet on the charge. As stated, if the interaction is actually a repulsion rather than an attraction, it would be ranked lower than any attraction.



Strongest Attraction 1____ 2_____ 3_____ 4_____ 5_____ 6_____ Strongest Repulsion

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

Or, all of these charges will experience no magnetic 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

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