

Answer on Question#53409 - Physics - Electrodynamics

You remove 2.0×10^{10} electrons from a quarter and the same number from a (smaller) penny. Do the coins end up with a net positive charge or a net negative charge? Which of the coins ends up with the greater net charge? Explain.

Solution:

Since electrons are negatively charged, then after the electrons are removed both coins will become positively charged. All electrons have the same electric charge, thus if we remove the same number of electrons from both coins, the net charge of these two coins will be the same (no matter which one is bigger).