

# task\_g8dmewbkx5ym2462\_with\_calculation

## Student Group

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|            |         |              |

## Table of Contents

Exercise E2 Charges on a Ballon ..... 2

charges, ballon, chapter1 2

## Exercise E2 Charges on a Ballon

A balloon has a charge of  $Q=7\text{ nC}$  on its surface.

**Result** How many additional electrons are on the balloon?

Solution

$$\begin{align*} & 43.7 \cdot 10^9 \text{ electrons} \end{align*}$$

$$\begin{align*} Q &= 7 \text{ nC} = 7 \cdot 10^{-9} \text{ C} \\ n_{\text{e}} &= \frac{7 \cdot 10^{-9} \text{ C}}{1.6022 \cdot 10^{-19} \text{ C/electron}} = \\ & 43.7 \cdot 10^9 \text{ electrons} \end{align*}$$

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