

task_1.2.2

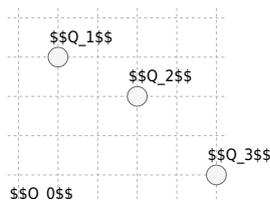
Student Group

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Table of Contents

Task 1.2.2 Variation: Multiple Forces on a Charge II (exam task, ca 8% of a 60 minute exam, WS2020) 2

Task 1.2.2 Variation: Multiple Forces on a Charge II (exam task, ca 8% of a 60 minute exam, WS2020)



Given is the arrangement of electric charges in the picture on the right.
The following force effects result:

$$F_{01} = -5 \text{ N}$$

$$F_{02} = -6 \text{ N}$$

$$F_{03} = +3 \text{ N}$$

Calculate the magnitude of the resulting force.

Result

$$|F_0| = \sqrt{(-0.418 \text{ N})^2 + (-9.264 \text{ N})^2} = 9.274 \text{ N} \rightarrow 9.3 \text{ N}$$

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