

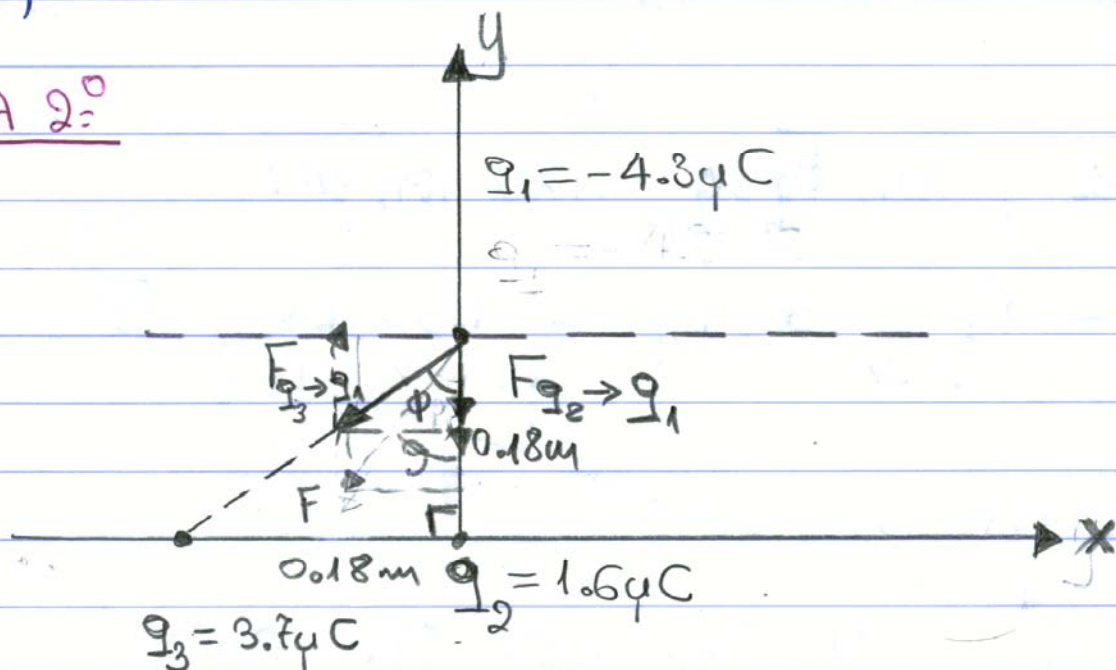
ΛΥΣΕΙΣ ΠΡΟΟΔΟΥ ΕΦ. Η/Μ (6-12-2008).

ΘΕΜΑ 1^ο

1. δ , 2. δ , 3. γ , 4. α , 5. δ , 6. δ , 7. α , 8. α

9. β , 10. α

ΘΕΜΑ 2^ο



$$F_{q_3 \rightarrow q_1} = k_{el} \frac{|q_1| |q_3|}{r_{13}^2} = k_{el} \frac{(4.3 \times 10^{-6}) (3.7 \times 10^{-6})}{(0.18)^2 + (0.18)^2} \text{ [N]}$$

$$\Leftrightarrow F_{q_3 \rightarrow q_1} = 9 \times 10^9 \frac{15.91 \times 10^{-12}}{2 \times 0.0324} \Leftrightarrow F_{q_3 \rightarrow q_1} = 2.21 \text{ N} \quad \textcircled{1}$$

$$F_{q_2 \rightarrow q_1} = k_{el} \frac{|q_1| |q_2|}{r_{12}^2} = 9 \times 10^9 \frac{(4.3 \times 10^{-6}) (1.6 \times 10^{-6})}{(0.18)^2} \Leftrightarrow$$