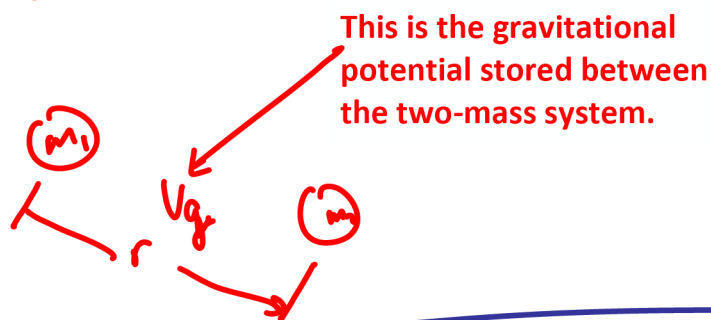
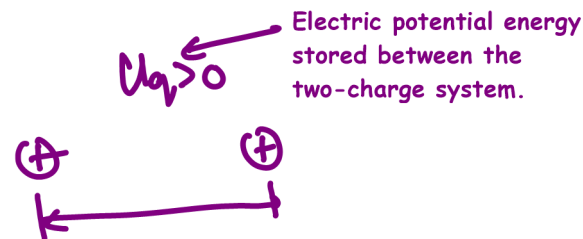


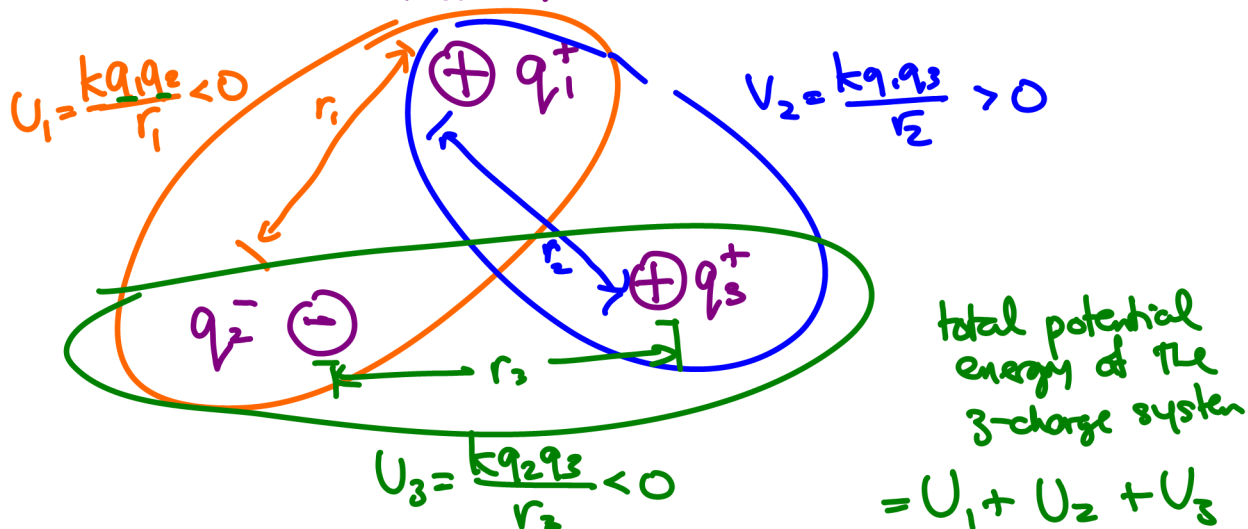
gravity



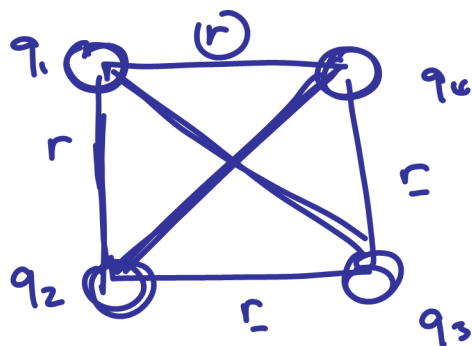
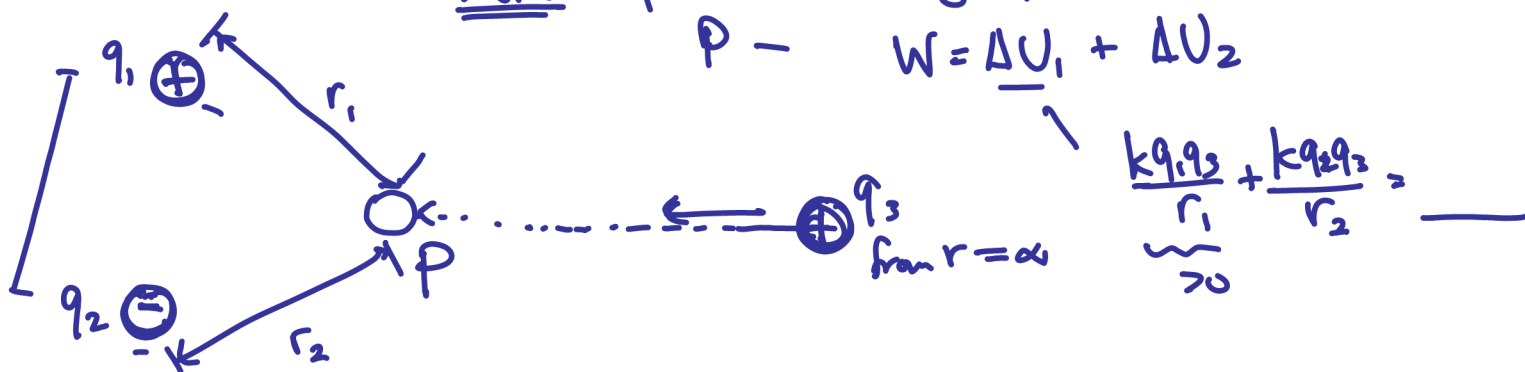
Charges



What if there are more than 2 charges?



Work required to bring q_3 from $r \rightarrow \infty$ to point P - $W = \Delta U_1 + \Delta U_2$



total energy

$$U = \frac{kq_1q_2}{r} + \frac{kq_2q_3}{r} + \frac{kq_3q_4}{r} + \frac{kq_1q_4}{r} + \frac{kq_1q_3}{\sqrt{2}r} + \frac{kq_2q_4}{\sqrt{2}r} =$$