66. (a) Since $K = qV$ we have $K_p = K_d = \frac{1}{2}K_\alpha$ (as $q_\alpha = 2K_d = 2K_p$).

(b) and (c) Since $r = \sqrt{2mK}/qB \propto \sqrt{mK}/q$, we have

$$r_d = \sqrt{\frac{m_d K_d}{m_p K_p}}\,\frac{q_p r_p}{q_d} = \sqrt{\frac{(2.00\,\mathrm{u})K_p}{(1.00\,\mathrm{u})K_p}}\,r_p = 10\sqrt{2}\,\mathrm{cm} = 14\ \mathrm{cm}\ ,$$

$$r_\alpha = \sqrt{\frac{m_\alpha K_\alpha}{m_p K_p}}\,\frac{q_p r_p}{q_\alpha} = \sqrt{\frac{(4.00\,\mathrm{u})K_\alpha}{(1.00\,\mathrm{u})(K_\alpha/2)}}\,\frac{e r_p}{2e} = 10\sqrt{2}\,\mathrm{cm} = 14\ \mathrm{cm}\ .$$