

We call v_o the escape velocity (speed)

e.g. for the Earth, $v_o = 11.2 \text{ kms}^{-1}$ (check!)

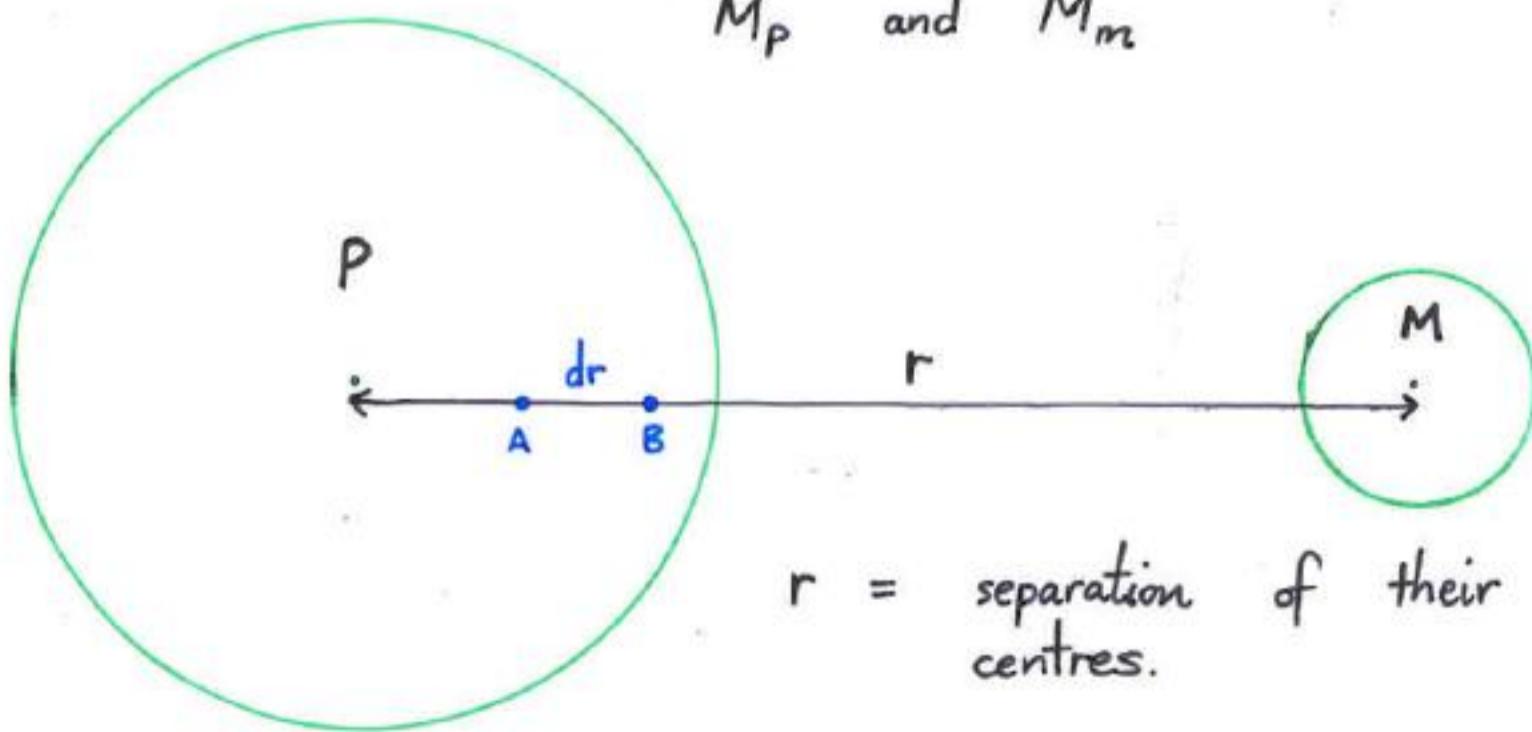
Jupiter, $v_o = 59.6 \text{ kms}^{-1}$

So if the projectile is launched with $E_{\text{tot}} \geq 0$, it will escape from the planet's gravity; if $E_{\text{tot}} < 0$, it will not escape.

- Note that v_{Escape} doesn't depend on the mass of the projectile
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Tidal Forces

Consider a planet (P) and moon (M), of radius R_p and R_m and mass M_p and M_m .



r = separation of their centres.