

Determine the escape speed from the sun.

$$E_k \text{ at surface} + E_g \text{ at surface} = 0$$

* Here we are letting $E_g = 0$ at ∞

So E_g at surface is a large - number.

$$\frac{1}{2}mv^2 = \frac{G M m_s}{r_s}$$

$$v = \sqrt{\frac{2 G m_s}{r_s}} = \sqrt{\frac{2 (6.67 \times 10^{-11} \frac{\text{Nm}^2}{\text{kg}^2}) 2.00 \times 10^{30} \text{ kg}}{6.95 \times 10^8 \text{ m}}}$$

$$= 6.20 \times 10^5 \text{ m/s}$$