

The escape velocity depends on mass M and radius r as

$$mv^2/2 = GmM/r$$

$$v = \sqrt{GM/r}$$

Hence, ratio of escape velocities will be

$$v_1/v_2 = \sqrt{M_1 \cdot r_2/M_2 \cdot r_1} = \sqrt{(5 \cdot 10/2)} = \sqrt{(25)} = 5$$