

79. We assume his initial kinetic energy (when he jumps) is negligible. Then, his initial gravitational potential energy measured relative to where he momentarily stops is what becomes the elastic potential energy of the stretched net (neglecting air friction). Thus,

$$U_{\text{net}} = U_{\text{grav}} = mgh$$

where $h = 11.0 + 1.5 = 12.5$ m. Consequently, with $m = 70$ kg, we obtain $U_{\text{net}} = 8.6 \times 10^3$ J.