Answer on Question #71691 – Physics – Molecular Physics | Thermodynamics

A 80.0-kg student climbs up a tree. The gravitational potential energy of the student at this point is 2.00 x 10(3) J. How high is the student above ground?

Solution. Let the potential energy be zero on the ground level. Then

$$mgh = E_{pot} \rightarrow h = \frac{2.00 \times 10^3 J}{9.81 \frac{m}{s^2} \cdot 80.0 \ kg} = 2.55 \ m.$$

Answer. $2.55 \ m.$