Q9) $\frac{1}{2}kx^2 = \frac{1}{2}mv_i^2$ If compressed 0.011 m, marble falls 0.21 m

$\frac{1}{2}k(1x^2) = \frac{1}{2}mv_i^2$

$v_i^2 = \frac{kx^2}{m}$

$v_i = \sqrt{\frac{kx^2}{m}}$

$mgh = \sqrt{\frac{kx^2}{m}}$

$\frac{kx^2}{m} = (mgh)^2$

$kx^2 = (mgh)^2 m$

$$x = \sqrt{\frac{(mgh)^2 m}{k}}\, m$$