

1. A spring of spring constant 2500 N/m is compressed 10 cm behind a 250 g projectile. When released, the projectile is fired into and sticks inside of a 2.0 kg block. The block and projectile lift up to a maximum height dh . I want to find dh . I have a plan to use $U_{sp} = U_g$ to solve for the final height. Does this method work?

- If this the correct way to find dh , please explain why this is correct, and find dh .
- If this method doesn't work, please explain why it will not work and what has to be done differently to find dh . You don't have to calculate it.

Use as much paper as you like. Your work is important for us to read!

