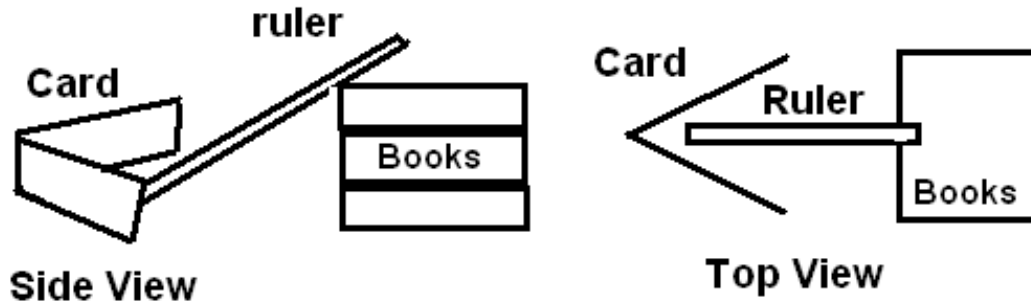


Marble GPE – KE Activity

Materials needed: Plastic ruler, 3 glass marbles, 3 textbooks, tape, folded card
Stack textbooks as shown, and tape ruler to books.



1. Measure height the top of the ramp (height above table). Record height in **m**: _____ **m**
2. Calculate GPE of the marble at this position if the marble has a mass of .002 kg.
3. What is the GPE of the marble when it's only half way up the ruler? (hint—it's only half as high off the table)
4. What is the GPE of two marbles at the top of the ruler?
5. If one marble is released from the top of the ruler, how much kinetic energy should it have at the bottom of the ramp? Explain.

Place your card right in front of the ruler on your desk and mark starting position on your desk.
Roll marble down ruler ramp into the card, and measure the distance the card moves. Complete all different trials and record data in table.

Sample Data Table: Distance Card is Pushed by Marble

Test:	GPE _{top} (J) (KE _{bottom})	Trial 1 (cm)	Trial 2 (cm)	Trial 3 (cm)	Average (cm)
1 marble from top					
2 marbles from top					
3 marbles from top					
1 marble from ½ way up					
2 marbles from					

[illegible]

[illegible]