



A 1 kg block (initially at rest) is placed in front of a spring that has been compressed 0.5 m from its uncompressed position. The spring constant is $k = 500 \text{ N/m}$. Assuming that all surfaces are frictionless (unless otherwise indicated) find (by energy methods)

- A. the KE and speed of the block at Pts. A–E;
- B. the centripetal force on the block at Pt. B;
- C. the normal force acting on the block at Pt. B;

PHYSICS 1
ANSWERS

AND STILL ANOTHER ALL-IN-ONE ENERGY PROBLEM

A.

Pt.	KE (J)	v (m/s)
A	62.5	11.2
B	57.5	10.7
C	62.5	11.2
D	47.5	9.75
E	46.5	9.64

B. 460 N

C. 450 N