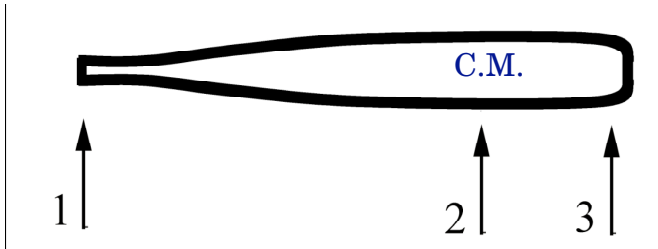


Momentum of a Baseball Bat

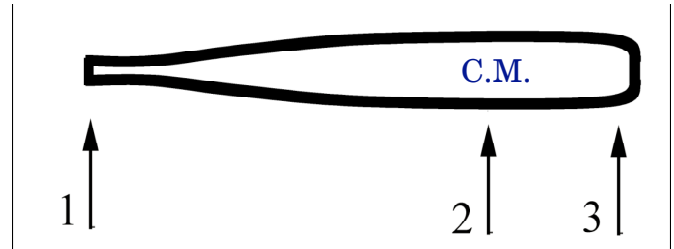
The greatest rate of increase of the bat's momentum will be produced by pushing with a force F at which of the following points?



- 1) Position 1.
- 2) Position 2.
- 3) Position 3.
- 4) All the same.
- 5) Cannot answer without more information.

Kinetic Energy of a Baseball Bat

The greatest rate of increase of the bat's kinetic energy will be produced by pushing with a force F at which of the following points?



- 1) Position 1.
- 2) Position 2.
- 3) Position 3.
- 4) All the same.
- 5) Cannot answer without more information.

Two masses are attached to two different springs and move on frictionless horizontal surfaces. Both springs are stretched and the masses are released from rest.

Mass A is 2 times larger than Mass B.

Spring A is 4 times stronger than spring B.

Spring A is pulled half as far as Spring B.

During the subsequent motion, which quantity is identical for both A and B?

- 1) The period of the motion.
- 2) The amplitude of the motion.
- 3) The initial acceleration.
- 4) The acceleration at equilibrium.
- 5) (1) and (2)
- 6) (2) and (3)
- 7) (3) and (4)
- 8) Some other combination of two of these.
- 9) Three of these are true.
- 10) All four are true.