

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?



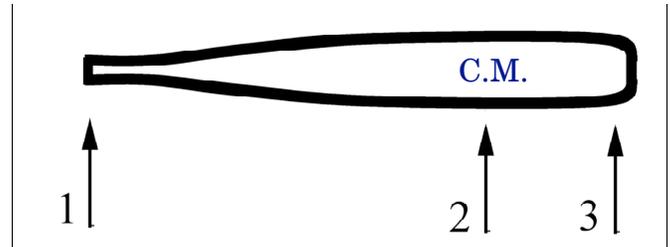
- 1) Position 1.
- 2) Position 2.
- 3) Position 3.
- 4) All the same.
- 5) Cannot answer without more information.

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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.

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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.

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