

PracTest Momentum

ID#

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- Which of the following is/are possible
I. an apple can have less momentum than a railroad car
II. an apple can have momentum equal to a railroad car
III. an apple can have more momentum than a railroad car
A. I only B. II only C. III only D. I and II only
E. I and III only F. II and III only G. I, II and III H. None
- Which of the following is/are appropriate unit(s) for momentum?
A. kg·m/s B. N/s C. Both D. Neither
- A certain particle undergoes erratic motion. At every point in its motion, the particle's momentum ALWAYS has the same direction as the particle's
A. velocity B. acceleration C. force
D. kinetic energy E. position F. none of these
- What is the mass of an object moving at 6m/s whose momentum is 48kg·m/s
A. 0.125kg B. 2kg C. 4kg D. 8kg
- What is the speed of a 4kg object whose momentum is 8kg·m/s?
A. 0.5m/s B. 1m/s C. 2m/s D. 4m/s E. 8m/s F. 32m/s



A



B



C



D

- Which object above has more inertia, A or D?
A. A B. D C. same for both
- Which object above (A, B, C, or D) above would be the easiest to stop?
A. A B. B C. C D. D
- Consider two particles, A and B. Particle A has a mass of 9kg and moves at 17m/s. Particle B has a mass of 10kg and moves at 15m/s. Which particle has more momentum?
A. Particle A B. Particle B C. Both have same momentum
- The rate of change in momentum of an object is equal to the
A. net force exerted on the object B. change in velocity of the object
C. impulse imparted to the object D. object's mass times the force exerted
- If a thrown egg hits a wall (and breaks), it will experience a certain impulse and a certain force upon impact. If a thrown egg is caught by a student (and survives), the egg will experience ? impulse and ? force upon impact.
A. more ; more B. more ; the same C. more ; less
D. the same ; more E. the same ; the same F. the same ; less
G. less ; more H. less ; the same I. less ; less
- Two identical boxcars are accelerated from rest. Boxcar A is acted on by a force of 1000N for 10s. How long must a 500N force act on boxcar B for it to undergo the same change in momentum?
A. 1s B. 5s C. 10s D. 20s E. 50s F. 100s
- A 3kg mass moving at 6m/s slides across a floor and comes to rest in 4s. The friction force acting on the mass was
A. 0.5N B. 1.0N C. 2.0N D. 4.5N E. 8.0N F. 12N