

**Momentum**

Total questions: 15

Worksheet time: 11mins

Name Class Date 

1. Why is momentum considered to be a vector quantity?
  - a) Momentum has to indicate both magnitude and direction.
  - b) Momentum has to have a positive value.
  - c) Momentum has to be calculated using speed.
  - d) Momentum has a quantity but not a unit.
  
2. Which of the following is the formula for momentum?
  - a)  $p = mv$
  - b)  $M = mv$
  - c)  $F = ma$
  - d)  $g = mc^2$
  
3. Which of the following is the unit for momentum?
  - a)  $\text{kg}\cdot\text{m/s}$
  - b)  $\text{kg}\cdot\text{m}$
  - c)  $\text{kg}\cdot\text{m/s}^2$
  - d) Momentum has no unit.
  
4. The momentum of an object is related to the object's mass and velocity.
  - a) True
  - b) False
  
5. An object with a mass of 2000 kg at rest has what momentum?
  - a) 2000 kg m/sec
  - b) 0 kg m/sec
  - c) 2000 kg
  - d) 2000 m/sec
  
6. When the speed of an object is doubled, its momentum
  - a) remains unchanged in accord with the conservation of momentum.
  - b) doubles
  - c) quadruples
  - d) decreases

7. The momentum of an object depends upon the object's \_\_\_\_\_ & \_\_\_\_\_.

- a) size and shape
- b) mass and speed
- c) mass and velocity
- d) mass and energy

8. Determine the momentum of 1000-kg car moving northward at 20 m/s.....

- a) 20000 N
- b) 20000 Joules
- c) 20000 Kg \* m/s
- d) 20000 kg \* m/s north

9. Momentum is a \_\_\_\_\_ quantity

- a) science
- b) scalar
- c) vector
- d) energy

10. Which of the following has the least amount of momentum?

- a) An ant walking along the ground
- b) An ant at rest
- c) An elephant walking
- d) An elephant running

11.

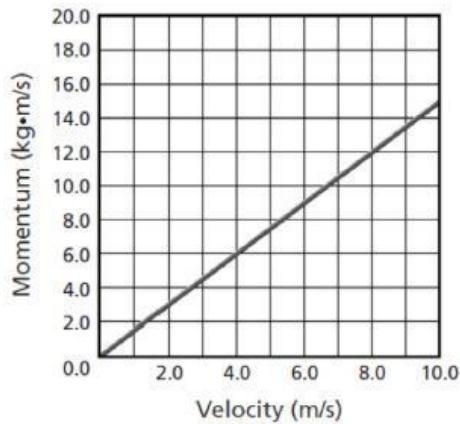


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A 50 kg ball rolls down the street at 5 m/s. Calculate the momentum of the ball.

- a) 55 kg\*m/s
- b) 100 kg\*m/s
- c) 250 kg\*m/s
- d) 500 kg\*m/s

12.



what is the objects momentum for 8 m/s

- a) 6
- b) 8
- c) 10
- d) 12

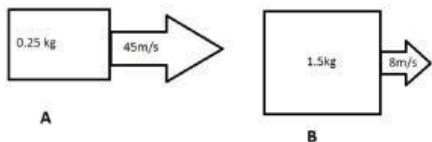
13.



The definition of momentum is

- a) Mass in Motion
- b) The size of an object
- c) The velocity of an object
- d) A comparison between two objects

14.



Which of the following images has more momentum?

- a) Object A
- b) Object B
- c) They are the same

15.



*m*  
*v*



$m/2$   
 $4v$



$6m$   
 $v/2$

Which object has the greatest momentum?

- a) Object A
- b) Object B
- c) Object C
- d) cannot be determined