



5. Displacement divided by time gives
- A) average acceleration.
  - B) average velocity.
  - C) average speed.
  - D) average distance.
6. Which one of the following is *not* an area of physics?
- A) Mechanics
  - B) Optics
  - C) Algebra
  - D) Acoustics
7. Newton's law of universal gravitation is assumed to be applicable
- A) to the Milky Way only.
  - B) on Earth and the Moon only.
  - C) throughout the universe.
  - D) to the solar system only.
  - E) on Earth only.
8. The relationship between mass and weight is given by the equation
- A)  $m = wg$ .
  - B)  $w = m/g$ .
  - C)  $g = mw$ .
  - D)  $w = mg$ .

9. If an object on Earth weighs 300 N, what is its weight in pounds?
- A) 67
  - B) 300
  - C) 31
  - D) 660
  - E) 1300
10. The buoyant force of an object is equal to the \_\_\_\_\_ of the \_\_\_\_\_ it displaces.
- A) mass; fluid
  - B) weight; fluid
  - C) mass; solid
  - D) weight; solid
11. Work is defined as force times
- A) distance.
  - B) time.
  - C) parallel distance.
  - D) perpendicular distance.
12. An object of mass 6 kg has a speed of 4 m/s and moves a distance of 2 m. What is its kinetic energy in joules?
- A) 48
  - B) 24
  - C) 17
  - D) 12

13. If you lift a 35-N weight vertically 50 m above the ground, you are
- A) doing work against gravity.
  - B) doing work against friction.
  - C) doing work against inertia.
  - D) doing none of these.
14. When an 6-kg object increases its gravitational on earth potential energy by 540 J, approximately how has its position changed?
- A) It has risen vertically 9 m.
  - B) It has fallen vertically 9 m.
  - C) It has risen vertically 90 m.
  - D) It has moved horizontally 90 m.
15. The kinetic energy of a pendulum is greatest
- A) when its potential energy is greatest.
  - B) at the top of its swing.
  - C) at the bottom of its swing.
  - D) when its total energy is greatest.