1. How long is a 10.0-ft pole in meters?

2. The ratio of mass to volume is known as _____.

- 3. Expressed in standard powers-of-10 notation and rounded to four significant figures, the number 0.00023648 is
 - A) 2.364 ×
 - B) 2.365 ×
 - C) 2.365 ×
 - D) $236.4 \times$
- 4. An object is dropped from a vertical distance of 31.7 m above the ground, and it takes 2.54 sec to fall that distance. A second identical object to launched from the same height, with a horizontal velocity of 64.0 m/s. How long does the second object take to fall the 31.7 m?
 - A) More than 2.54 sec
 - B) Almost 2.54 sec.
 - C) Less than 2.54 sec
 - D) Exactly 2.54 sec
 - E) Much less than 2.54 sec

- 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.