

Forces in Fluids ▪ Chapter 11 Pre-Assessment

Write the letter of the correct answer on the line at the left.

- _____ 1. Which of the following is an example of a force?
 - a. water
 - b. other fluids
 - c. gravity
 - d. mass
- _____ 2. A fluid can be
 - a. a gas only.
 - b. a liquid only.
 - c. a solid or a gas.
 - d. a liquid or a gas.
- _____ 3. The velocity of an object is
 - a. its standard reference point.
 - b. the rate of change of its position.
 - c. the process of speeding it up.
 - d. its change in direction.
- _____ 4. Earth's gravity pulls you down with a force
 - a. greater than your weight.
 - b. the size of your feet.
 - c. equal to your weight.
 - d. half your weight.

Forces in Fluids ▪ Section 11.1 Quiz

Fill in the blank to complete each statement.

1. The amount of pressure you exert depends on the _____ over which you exert a force.
2. Earth's atmosphere is made up of a fluid called air that is a mixture of _____.
3. The downward atmospheric pressure that is exerted over the surface of your hand is _____ by the upward pressure on your hand.
4. Atmospheric pressure _____ as the elevation above sea level increases.
5. Water pressure _____ as you descend below sea level.

Forces in Fluids ▪ Section 11.2 Quiz

If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

- _____ 1. By comparing densities you can predict whether an object will float or sink in a fluid.
- _____ 2. You can make an object float or sink by changing its density.
- _____ 3. The buoyant force in a fluid acts in the same direction as the force of gravity.
- _____ 4. Archimedes' principle states that the buoyant force acting on a submerged object is equal to the weight of a volume of fluid displaced by the object.
- _____ 5. Ships that have hollow, water-tight chambers or compartments decrease their buoyancy.

Forces in Fluids ▪ Section 11.3 Quiz

Fill in the blank to complete each statement.

1. Underwater animals such as sea stars use fluid _____ to move.
2. By changing fluid pressure anywhere in a closed container you transmit _____ throughout the container.
3. Pascal's principle states that when pressure is applied to a confined fluid that the pressure increases by the _____ amount throughout the confined fluid.
4. In a hydraulic system you increase the pressure by applying the pressure to a _____ surface area.
5. The formula for pressure is $\text{pressure} = \frac{\text{_____}}{\text{area}}$.

Forces in Fluids ▪ Section 11.4 Quiz

If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

- _____ 1. The Wright brothers used fluid pressures and unbalanced forces to fly the first airplane.
- _____ 2. Bernoulli's principle states that the faster a fluid moves, the more pressure the fluid exerts.
- _____ 3. Blowing air quickly between two cans raises the air pressure between them.
- _____ 4. The shape of an object can cause air to move more or less quickly above or below it.
- _____ 5. The sum of the air pressure above and below an airplane wing creates lift.