

AP Physics 2

Quiz: Fluids, Form:

A

Name: _____

Date: _____

Period: _____

Peer Reviewer: _____

Authentication Code: _____

Section 1. True or False

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- _____ Objects that float in water must be lighter than the water they are floating in.
- _____ The density of an object and the density of the fluid determine whether an object will float or sink.
- _____ Wood always floats and metal always sinks.
- _____ Heating air causes its molecules to move faster.
- _____ Liquid rises up a straw because of suction.
- _____ Hydrostatic pressure does not depend on the shape of the fluid's container, only the depth below the surface.
- _____ Fluids that are moving exert a higher pressure on their surroundings.
- _____ A cylindrical pipe of diameter 2-cm is connected to another cylindrical pipe of diameter 1-cm. When water flows through the pipe, it flows faster in the 1-cm section.
- _____ Water always flows downward, toward the lowest point.
- _____ Using a U-shaped glass tube, it is possible to create a bridge-like structure that connects two fishtanks and allows fish to swim from one tank to the other.
- _____ "Fluid" and "liquid" mean the same thing.
- _____ A graduated cylinder is placed on a scale and half-filled with water. A metal object is supported with a thin wire, and carefully lowered into the cylinder so that it is completely immersed in the water, but does not touch the bottom or sides of the graduated cylinder. The reading on the scale increases.
- _____ Opening the windows during a tornado is a good idea, as it will equalize the pressure between the inside and outside of the house and minimize damage.
- _____ Water is forced through a dam due to hydrostatic pressure.
- _____ Few creatures live in the very deepest parts of the ocean because the pressure is so great, it would kill them.
- _____ Bernoulli's Equation is really just a statement of the Law of Conservation of Energy.

Answer Key for Exam A

Section 1. True or False

- False Objects that float in water must be lighter than the water they are floating in.
- True The density of an object and the density of the fluid determine whether an object will float or sink.
- False Wood always floats and metal always sinks.
- True Heating air causes its molecules to move faster.
- False Liquid rises up a straw because of suction.
- True Hydrostatic pressure does not depend on the shape of the fluid's container, only the depth below the surface.
- False Fluids that are moving exert a higher pressure on their surroundings.
- True A cylindrical pipe of diameter 2-cm is connected to another cylindrical pipe of diameter 1-cm. When water flows through the pipe, it flows faster in the 1-cm section.
- False Water always flows downward, toward the lowest point.
- True Using a U-shaped glass tube, it is possible to create a bridge-like structure that connects two fish tanks and allows fish to swim from one tank to the other.
- False "Fluid" and "liquid" mean the same thing.
- True A graduated cylinder is placed on a scale and half-filled with water. A metal object is supported with a thin wire, and carefully lowered into the cylinder so that it is completely immersed in the water, but does not touch the bottom or sides of the graduated cylinder. The reading on the scale increases.
- False Opening the windows during a tornado is a good idea, as it will equalize the pressure between the inside and outside of the house and minimize damage.
- True Water is forced through a dam due to hydrostatic pressure.
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- True Bernoulli's Equation is really just a statement of the Law of Conservation of Energy.