

Pascal's principle

Total questions: 13

Worksheet time: 7mins

Name Class Date

1. Pascal states that

- a) Pressure is force per unit area
- b) When velocity is higher, the pressure is lower
- c) When force is applied, the pressure is transmitted equally through the fluid
- d) Pressure transmitted is directly proportional to the force applied

2. Which object involving pascal principle

a)



b)



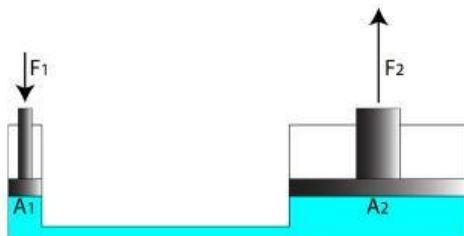
c)



d)



3.



Which comparison is correct

a) $F_1 = F_2$ b) $P_1 > P_2$
 c) $F_1 > F_2$ d) $P_1 = P_2$

4. Pressure can be measured in Pascals (Pa) or Newtons per square meter.

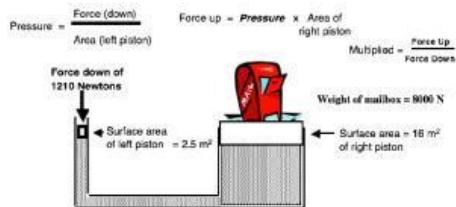
$$1 \text{ Pa} = 1 \text{ N/m}^2$$

a) True b) False

5. As the area a force acts on increases, the force exerted on each unit of area

a) increases b) decreases
 c) remains constant

6.



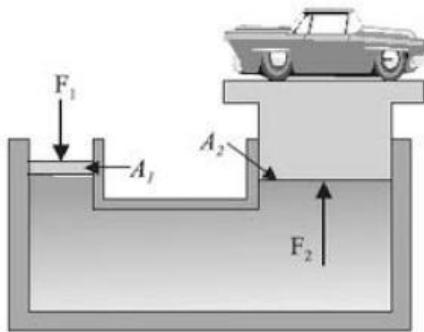
What is the pressure in the hydraulic fluid?

a) 1210 N b) 484 N/m^2
 c) 8000 N d) 3025 N/m^2

7. What is the greatest benefit of using hydraulics?

a) The multiplication of speed b) The multiplication of operating time
 c) The multiplication of fuel efficiency d) The multiplication of force

8.



In a car lift, compressed air exerts a force, F_1 on a small piston having a radius of 5.5 cm. This pressure is transmitted to a second piston of radius 20 cm as shown in figure above. The mass of the car is 1250 kg. Calculate the pressure on the smaller piston F_1 .

a) 6.25 kPa b) 61.31 kPa
 c) 97.57 kPa d) 306.56 kPa

9. The basic idea behind any hydraulic system is very simple: Force that is applied at one point is transmitted to another point using _____

a) A compressible fluid b) An incompressible fluid
 c) A cold compress d) A hot compress

10. The buoyant force acting on an object is equal to the...

a) mass of the liquid displaced by the object b) weight of the fluid displaced by the object
 c) mass of the solid d) sum of the weight of the solid and liquid displaced

11. Archimedes Principle is the law of what?

a) Buoyancy b) Fluids
 c) Mass d) Matter

12. The buoyancy force always opposes...

a) Fire b) Water
 c) Gravity d) Air

13. what the principle from pascals' law

a) Submarine b) hydraulic jack
 c) Ship d) katie