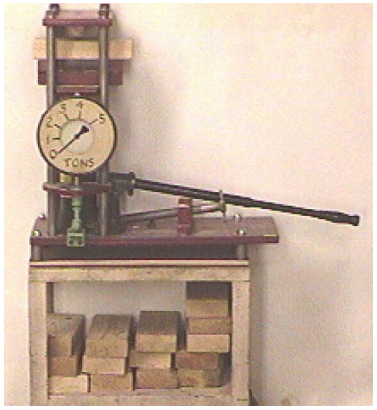
If I heat an enclosed volume of gas so that its Kelvin temperature doubles, what happens to the average speed of the molecules in the gas?

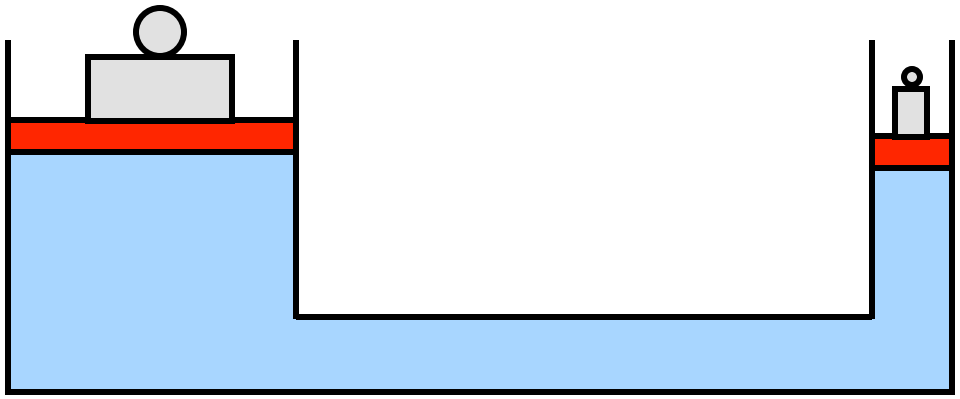
1. It more than doubles.
2. It doubles.
3. It increases by between 50% and 100%.
4. It increases but by less than 50%.
5. It stays the same
6. It decreases.

Pascal's Principle

A force exerted on a part of a fluid is transmitted through the fluid and expressed in all directions.

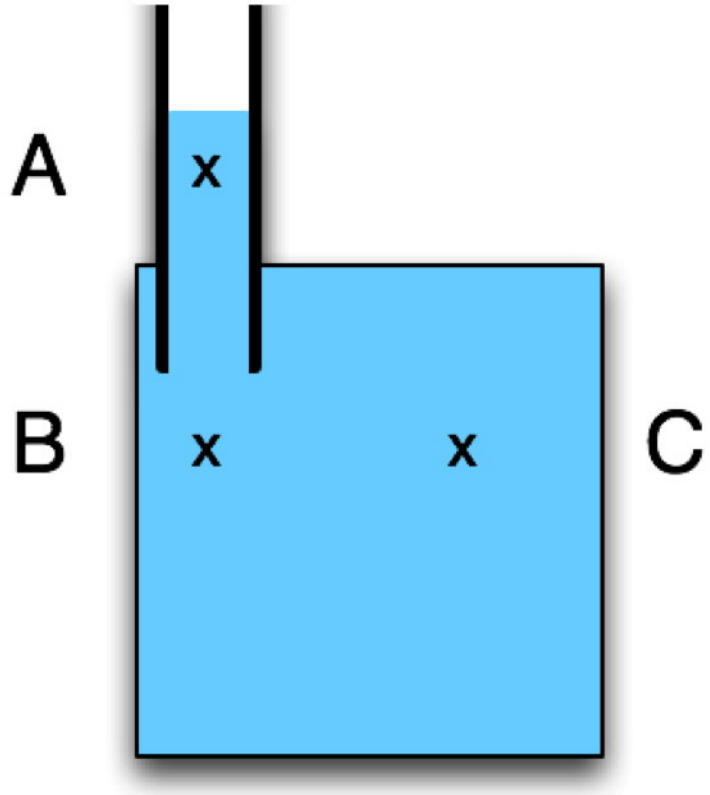
$$\frac{W_1}{A_1} = \frac{W_2}{A_2}$$





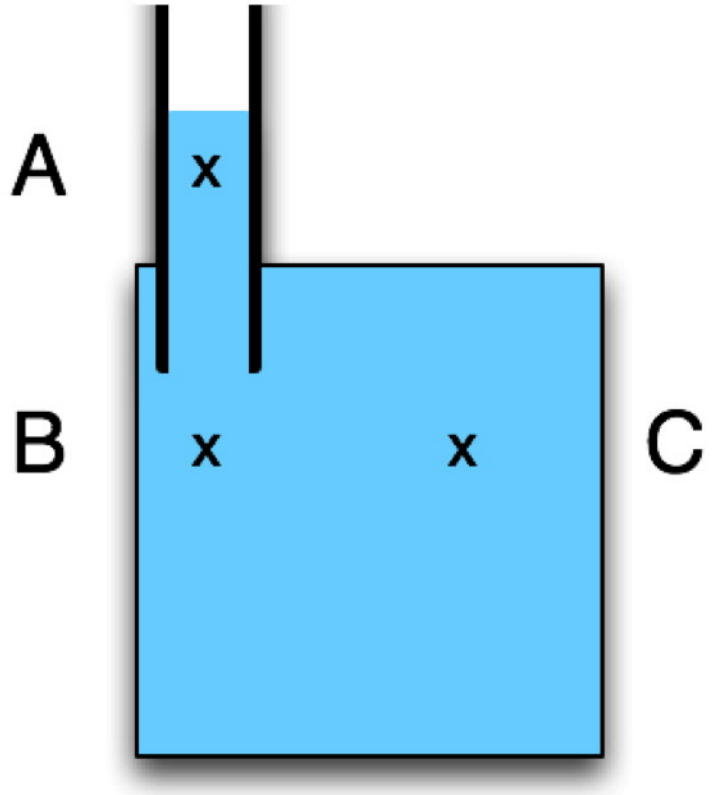
The gas can shown in the figure below is filled so that the gas goes up into the spout. How does the pressure at A and B compare?

A. $P_A > P_B$
B. $P_A = P_B$
C. $P_A < P_B$
D. You can't tell from the information given



The gas can shown in the figure below is filled so that the gas goes up into the spout. How does the pressure at B and C compare?

A. $P_C > P_B$
B. $P_C = P_B$
C. $P_C < P_B$
D. You can't tell from the information given



Consider the containers at right. Which of the following correctly compares the *pressure* (P) of the water at the bottoms of the containers?

A. $P_1 = P_2 = P_3$

B. $P_3 > P_1 > P_2$

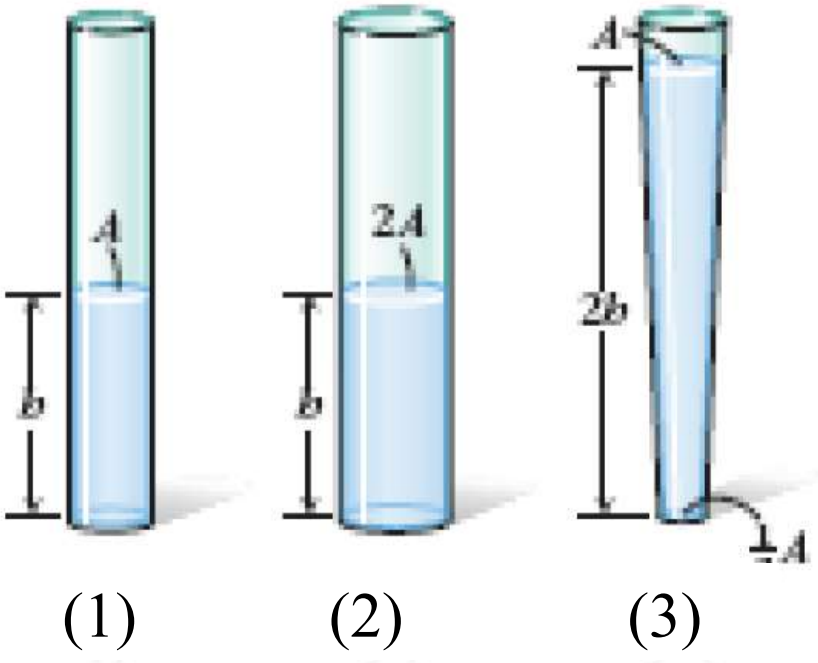
C. $P_3 > P_1 = P_2$

D. $P_2 > P_1 > P_3$

E. $P_1 = P_2 > P_3$

F. $P_2 > P_1 = P_3$

G. None of these



Consider the containers at right. Which of the following correctly compares the *force* (F) exerted by the water on the bottoms of the containers?

A. $F_1 = F_2 = F_3$

B. $F_3 > F_1 > F_2$

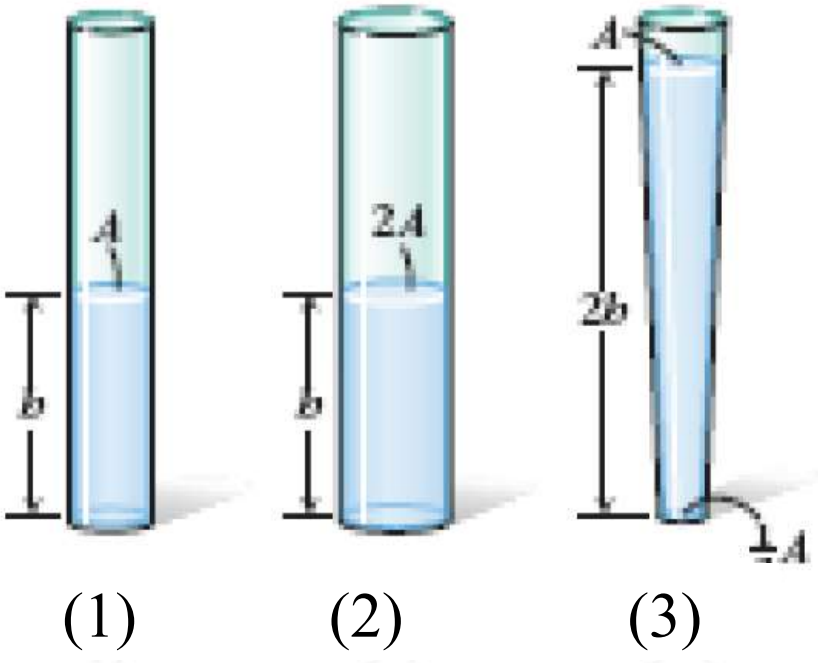
C. $F_3 > F_1 = F_2$

D. $F_2 > F_1 > F_3$

E. $F_1 = F_2 > F_3$

F. $F_2 > F_1 = F_3$

G. None of these



An object hung from a spring scale is lowered into water. When the object is immersed, the scale will read

1. a larger value
2. a smaller value
3. the same value
4. can't tell – not enough info