Bernoulli's Principle Worksheet

Bernoulli's Principle.

1. State Bernoulli's Principle → AS FLUID SPEED INCREASES, PRESSURE DECREASES
2. Explain why the balloons move toward each other in Figure-4 using Bernoulli's principle.

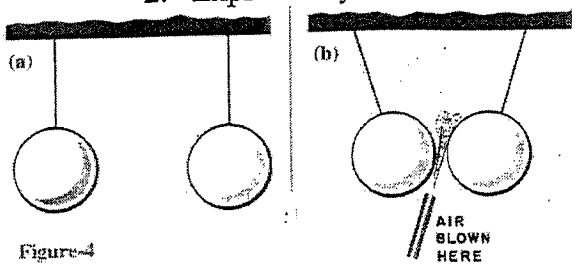
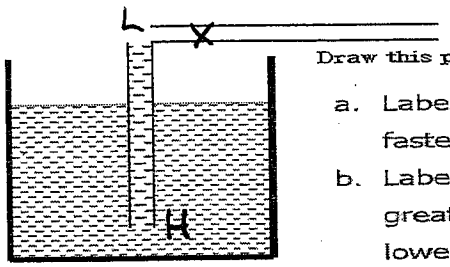


Figure-4

AS THE FLUID SPEED (AIR) BETWEEN THE BALLOONS INCREASES, PRESSURE DECREASES BETWEEN THE BALLOONS. THE PRESSURE ON THE OUTSIDE OF THE BALLOONS IS GREATER AND THE BALLOONS ARE PUSHED TOGETHER AS A RESULT.

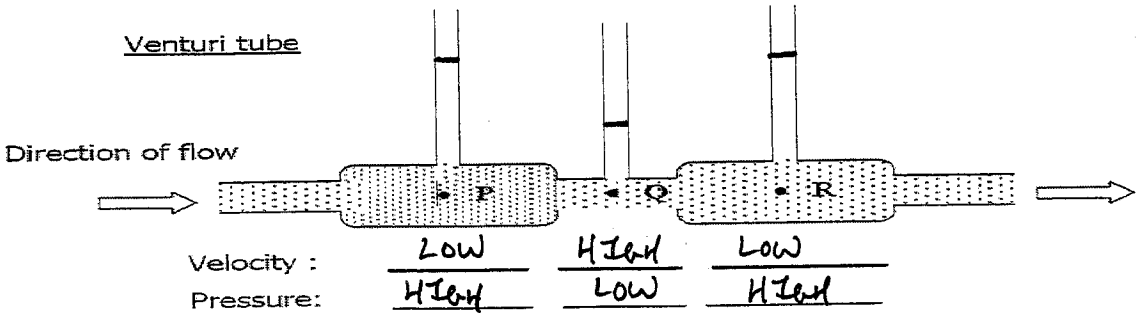
3.



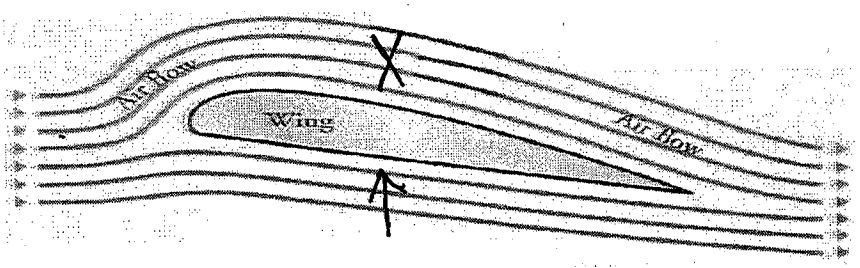
Draw this picture and do the following:

a. Label with "**X**" on the diagram, where the air is moving faster.
b. Label with "**H**" on the diagram, where the air pressure is greater and "**L**" on the diagram, where the air pressure is lower.
c. The conclusion we can draw from this situation is; when the velocity of air flow INCREASES the air pressure DECREASES.

4. Label the velocities and Pressures below using High and Low.



5.



(a) The shape of the WING causes the SPEED of the air flowing over the top to be FASTER than the speed of the air below.

(b) In accordance with BERNOULLI'S principle, the PRESSURE below the aerofoil is GREATER than the pressure above. Label the low pressure area with an "X".

(c) A LIFTING FORCE will act on the aerofoil. Label with an arrow the direction of the lifting force.