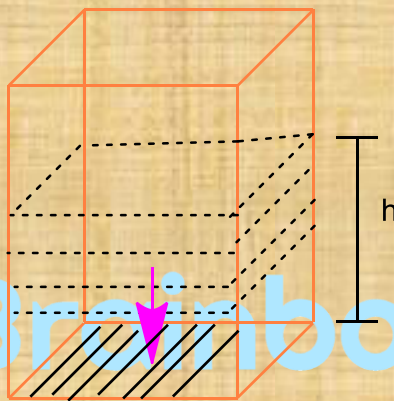


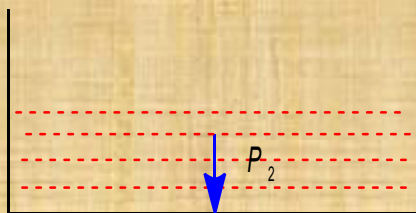
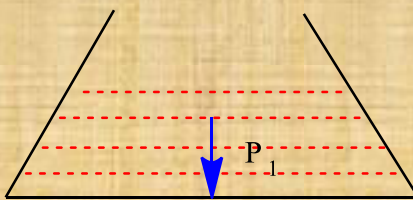
FORCE AND PRESSURE

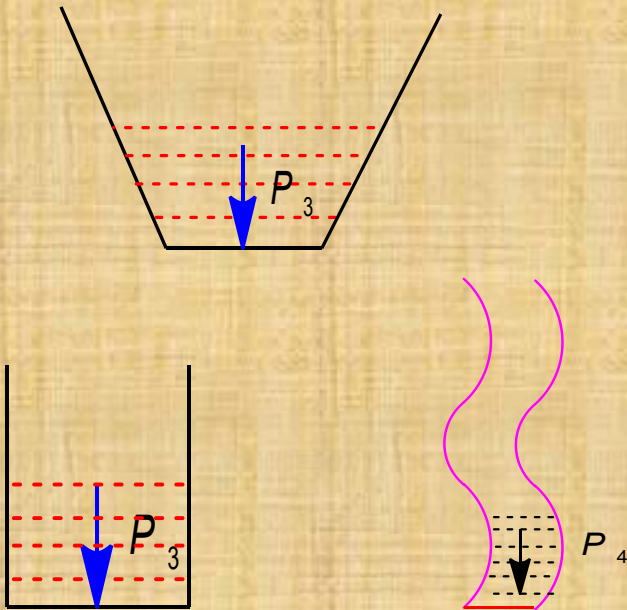
Pressure due to liquid:

- Liquids exerts a pressure on the wall of the container in which they are.
- The pressure that a liquid exerts on the bottom of the container is depends on height of the liquid in the container.



- The pressure on bottom of container depends only on height of liquid column not on volume of liquid.

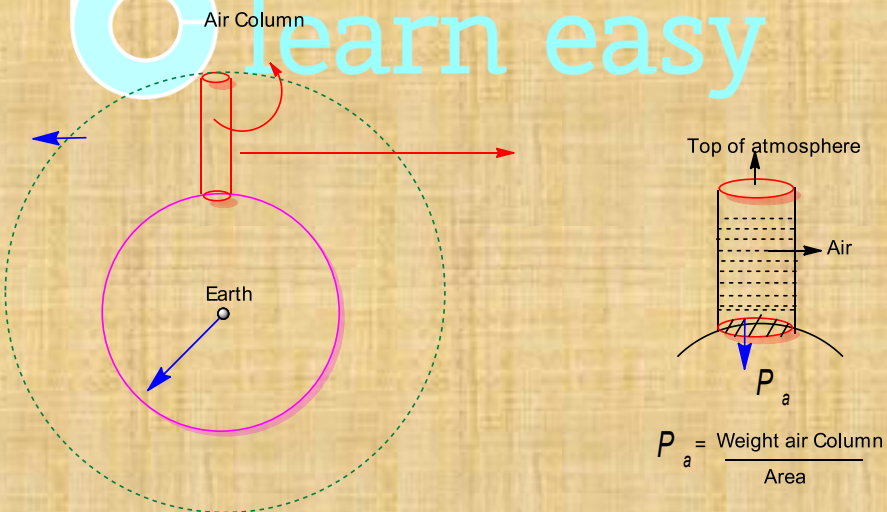




$$P_1 = P_2 = P_3 = P_4$$

Atmospheric pressure (P_a):

- The air present in the atmosphere exerts a pressure on the surface of the earth is called atmospheric pressure.



- The value of atmospheric pressure is measured with the help of a barometer.
- The value of atmospheric pressure is approximately $1.01325 \times 10^5 \text{ Pa}$.

$$= 1.01325 \times P_a$$
$$\approx 1 \times 10^5 P_a$$

Note:

- As one going inside sea pressure increases.
- As one going altitude (height above the ground) pressure decreases.
- The liquids present inside our body exerts a pressure from inside to outside which is balanced by atmospheric pressure which is acting outside to inside due to atmosphere.
- Sometimes at higher altitudes where atmospheric pressure is low, nose bleeding occurs because decrease in outside pressure than inside pressure.
- In space, no atmospheric pressure because of no atmosphere, so astronauts must wear special suits, which produces a pressure to balance inside pressure.

