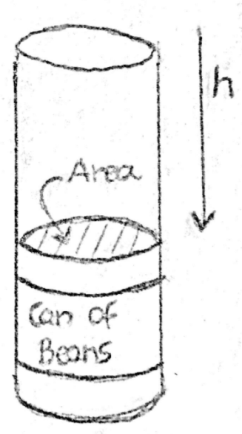
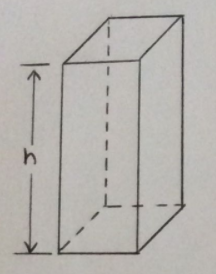
**How do you find the pressure in a fluid?**

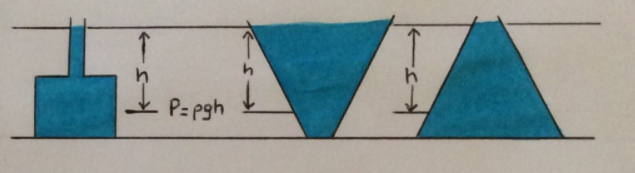
**Order the sentences**

|  |
| --- |
| You'll often see this formula with the h and the g swapping places like this,  *(sketch by the author)* |
| The weight of the column of water above the can of beans is creating pressure at the top of the can. |
| Consider a can of beans in a pool as seen in the diagram. |
| According to the definition of pressure |
| But can be written in terms of the density and volume of the water.  Since density , we can solve this for the mass of the water column |
| We know that the volume of a cylinder is where A is the area of the base of the cylinder and h is the height of the cylinder. We can plug in Vw=Ah for the volume of water into the previous equation and cancel the areas. |
| The force F is the weight of the column of water above the can of beans. The weight of the column of water is |
| So |
| So this formula would work equally well for any object in any liquid. |
| We get |

**To sum up**

Static fluid pressure does NOT depend on the shape, total mass, or surface area of the liquid.

**Pressure =**



Volume = hA

Weight = mg

d = m / V

*(sketch by the author)*

**Check the units!**

|  |
| --- |
| **Pressure = density x g x depth**  **[N/m2] = [ ] x [ ] x [ ]** |