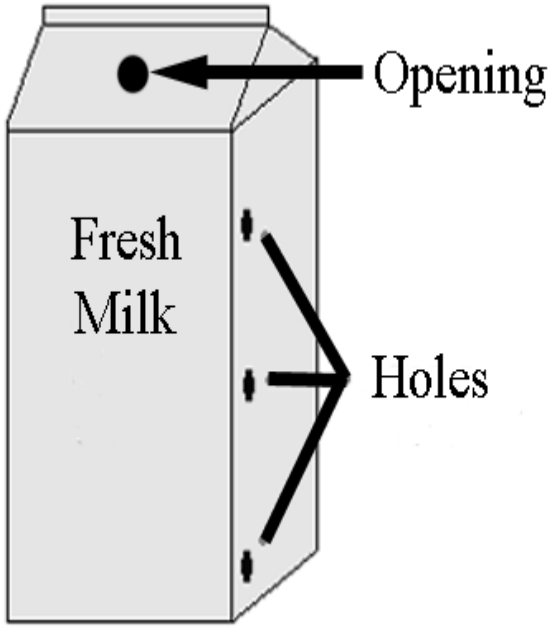
Pressure – exam questions

2012 - Higher

- Three holes were made in a carton of milk at the same time. From which hole will the milk pour out at the greatest rate? Give a reason for your answer.

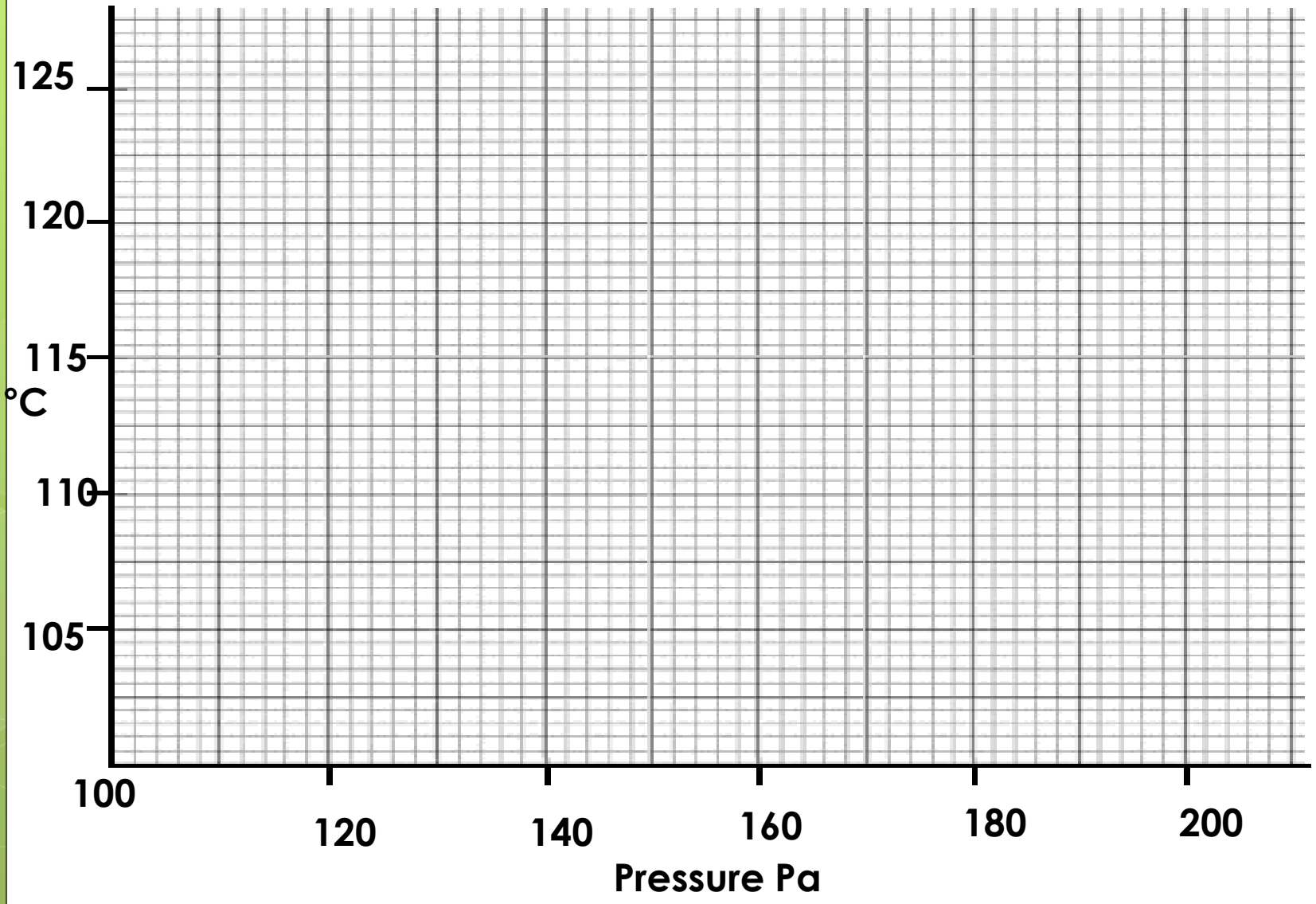


- Define pressure

- An experiment was performed to investigate the effect of pressure on the boiling point of water.

Pressure (kPa)	100	120	140	160	180	200
Temperature °C	100	105	109	114	119	124

Draw a graph of pressure against temperature using the grid below


125
120
115
110
105
ture °C
100
120
140
160
180
200
Pressure Pa

- What two pieces of information can be drawn from the graph about the relationship between the boiling point of water and pressure.

- What effect would reducing the pressure on water below normal atmospheric pressure, about 100 kPa, have on its boiling point?

2012 - Ordinary

- Complete the equation in the box below using the words from the list on the right.

- Pressure = _____

Area
Force

- Is the atmospheric pressure at the top of Mount Everest **higher** or **lower** than the pressure at the bottom?

- **Name** the instrument used to measure pressure.

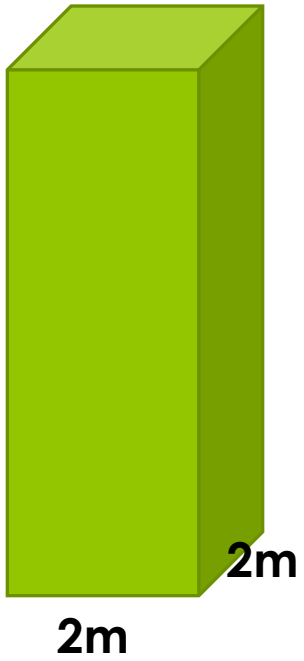
2011 - Higher

- Name the force that holds the atmosphere to the Earth.
- This force gives the atmosphere weight and causes atmospheric pressure.
- Define pressure and give the unit for pressure.
- Why does atmospheric pressure decrease with height?

2010 - Higher

- The diagram shows a tank full of water. The mass of the water in the tank is 48 000 kg.

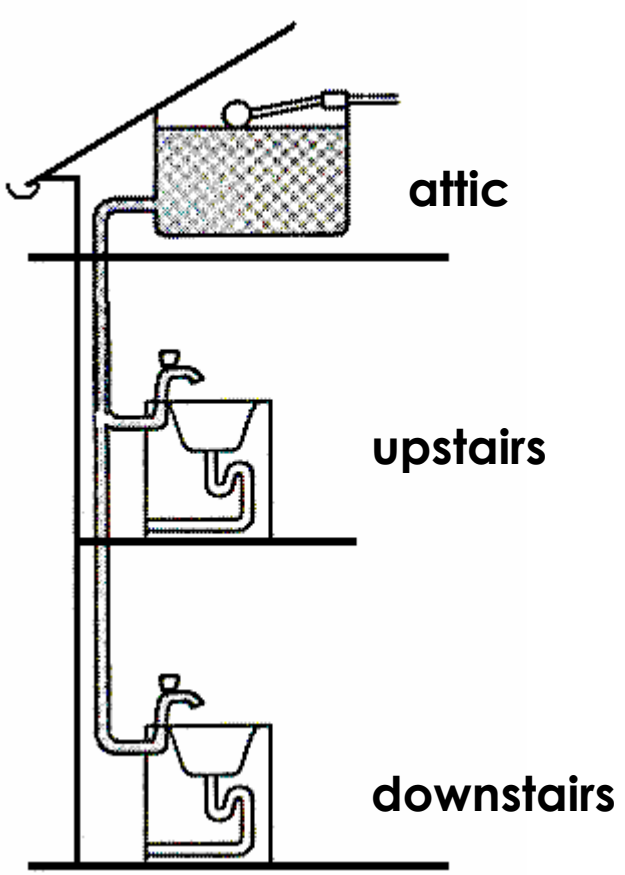
- Calculate the ***approximate pressure*** that it exerts on the base of the tank. Give the ***units*** of pressure with your answer.



2010 - Ordinary

- A household water supply has a water tank in the attic. The water pressure at the upstairs tap is lower than at the downstairs tap.

- Give a reason why this is the case.



2010 - Ordinary

- Complete the equation in the box below using the words on the right.

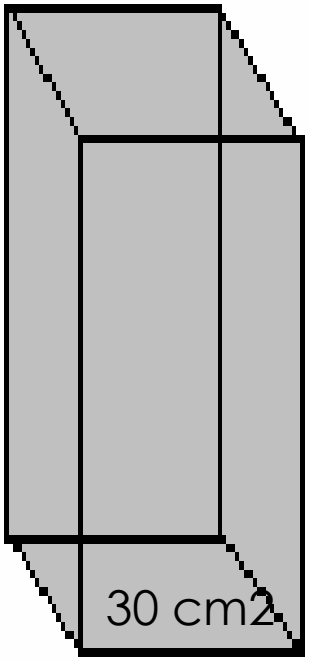
Pressure = _____

Force
Area

- If the **area** of the face of a metal block is **30 cm2** and the **force (weight)** of the block is **90 N**, find the pressure being applied by the block.

- **Pressure** = _____N/cm2

- **Name** the instrument used to measure pressure.

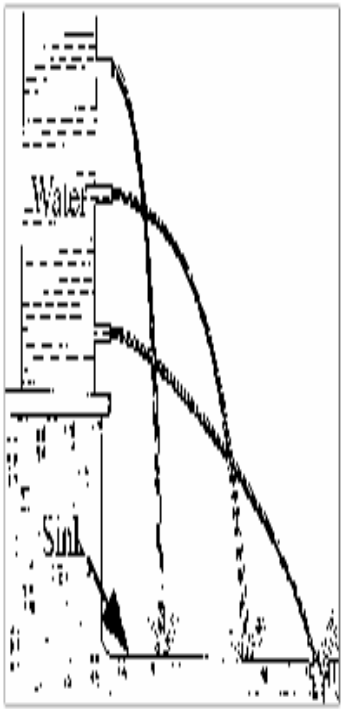


2009 – Higher

(c) The diagram shows a container with three spouts. The container is filled with water. Jets of water pour out of the spouts. Why does the ***jet of water from the bottom spout travel the furthest out from the container***?

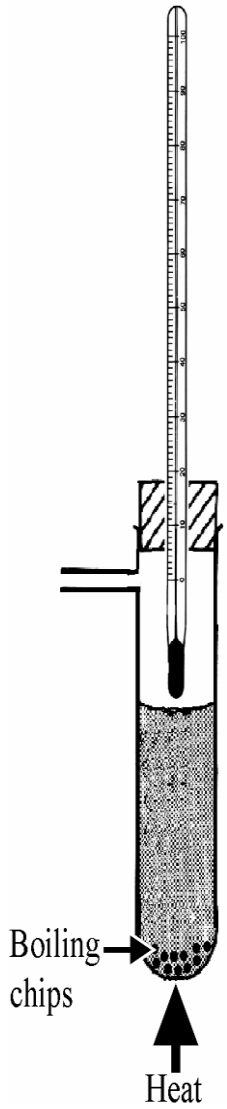
Why? _____

_____



2009 - Higher

- The ***boiling point of water*** can be determined using the apparatus shown in the diagram. Why are ***boiling (anti-bumping) chips*** added to the water?
- At what ***temperature*** does ***water boil***, at ***standard*** (normal) ***atmospheric pressure***?
- What ***effect*** does the ***raising of pressure*** have on the ***boiling point*** of water?
- What ***effect*** does the ***lowering of pressure*** have on the ***boiling point*** of water?



2009 - Ordinary

- **Complete** the equation in the box below using the words on the right

- Pressure = _____

Area
Force

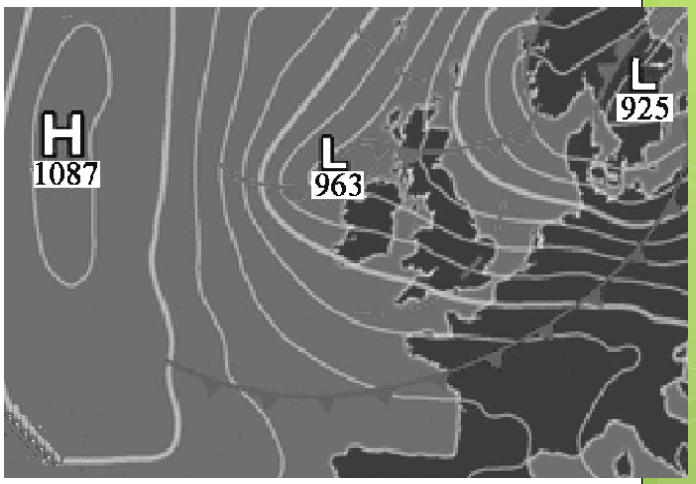
- If a metal block applies a force of 20 N on an area of 5 cm2, find the pressure being applied by the block.

- **Pressure** = _____ N / cm2

2007 - Higher

- The diagram is an Atlantic weather chart. Use the chart to predict **two *weather conditions*** that you might expect for Ireland.

- Explain why low atmospheric pressure ***causes* one** of the weather conditions that you have given.



2006 - Ordinary

- **Complete** the equation in the box below using the words

- Pressure = _____

Area
Force

- **Name** the piece of equipment used to measure pressure?