Pressure

Answers

KS3 science quick questions

This topic online

Activate 2: Motion and pressure | Exploring Science 8I

Q	Answer	Remember
1	area	The same force on a smaller area gives a bigger pressure.
2	pressure = force / area	Force on top, area underneath - you share the force out over the area.
3	N/m^2	Newtons for the force, square metres for the area. You may also see this unit called the pascal (Pa).
4	100 N/m^2	200 ÷ 2 = 100 N on every square metre.
5	300 N/m^2	60 ÷ 0.2 = 300. Dividing by a number less than 1 makes the answer bigger.
6	smaller	Bigger area, same force, so less pressure - you sink less.
7	small area	A tiny area turns your push into a huge pressure.
8	increases	The deeper you go, the more water there is above you.
9	bottom	This is why dam walls are built thicker at the base.
10	atmospheric pressure	The atmosphere is a deep ocean of air pressing on everything.
11	decreases	Higher up there is less air above you, and the air is thinner.
12	all directions	Pressure in a liquid or gas pushes every way at once - on the top, sides and bottom.
13	fluids	Fluids are anything that flows. Both water and air give pressure and upthrust.
14	weight	Floating means the up and down forces balance.
15	bigger	If weight wins against upthrust, the object sinks.
16	30000 N/m^2	600 ÷ 0.02 = 30 000 - a small area makes a big pressure.
17	2 N/cm^2	The unit follows the area: newtons ÷ square centimetres gives N/cm^2.
18	1200 N	Force = pressure × area, so 400 × 3 = 1200 N.
19	bigger	Air gives upthrust too - the light balloon is pushed up by the heavier air around it.
20	Deeper down there is more water above pressing down, so there is a greater weight of water on each square metre.	Think of the weight of all the water stacked on top of you.

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