CIE Physics GCSE

Topic 1.8 - Pressure

Flashcards

Give the equation for pressure.

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pressure = force / area

P = F/A

What are the units for pressure?

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Pascals, Pa

Pressure in a fluid _____ with depth. Why?

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Increases, because it is caused by the gravitational force of the fluid above that point.

Give the equation for pressure at different depths of a fluid (supplement)

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pressure (Pa) = depth (m) x density (kg/m^3) x gravitational field strength (N/kg)

$p = h\rho g$

What does an object in a fluid experience as a result of pressure?

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Forces at right angles to all of its surfaces.

Describe a simple mercury barometer.

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Atmospheric pressure balances a column of mercury, so its height can be measured to give an indication of pressure.

What is a manometer?

What is a manometer?

A device used for measuring pressure.

Describe how manometers measure pressure.

Describe how manometers measure pressure.

They contain glass tube (in the shape of a U) filled with liquid (eg. mercury). It measures the difference in pressure between the fluids each arm is submerged in.