

Pressure

Pressure shows how force is distributed over some area. If force F is applied perpendicularly to area A , the pressure is

$$p = \frac{F}{A}$$

Unit of pressure is called pascal, $1 \text{ Pa} = 1 \text{ N}/1 \text{ m}^2$

Homework 23

Problem 1

What pressure do you produce when pushing a pushpin into a wall with a force 5 N? Take the area of a pushpin to be 0.01 mm^2 . Express the answer in pascals using scientific notation.

Problem 2 (bonus)

Find a way to measure the area of the palm of your hand (hint: it might be useful to use some quad ruled paper). Use it to find the pressure you exert on a wall when pushing with the whole palm with force 50 N. Compare it to the pressure created by the pushpin in the previous problem.