

Sept. 24 Test - Fri or Tues

Situations where your ears might "pop".

- Airplane - going up and down
- up and down mountains
- going into deeper water
- blowing up a tiny balloon (whimp)
- Tall building - up + down

Air Pressure

- atmospheric pressure $\approx 15 \frac{\text{lbs}}{\text{in}^2}$

($14.7 \frac{\text{lb}}{\text{in}^2}$)

- atmosphere bar

- area of hand



6" 24 in²

$$15 \frac{\text{lb}}{\text{in}^2} \times \frac{24 \text{ in}^2}{1} = 360 \text{ lb}$$

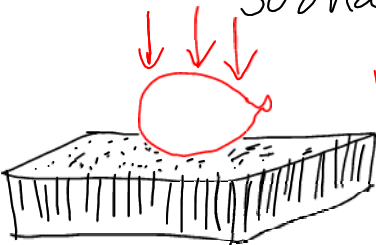
- Flying and ear popping -
- Trick to keep little kids from having ear pain on a flight

Bed of Nails
625 Nails

Butt, you don't sit on all of them.

you 100lbs
Nails 300 nails

So ... $\frac{100 \text{ lb}}{300 \text{ nails}} = \frac{1}{3} \frac{\text{lb}}{\text{nail}}$



Does not Break

$$P = \frac{\text{Force}}{\text{Area}} = \frac{\text{lbs}}{\text{in}^2}$$