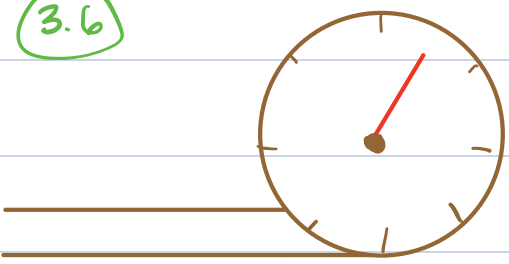
3.6



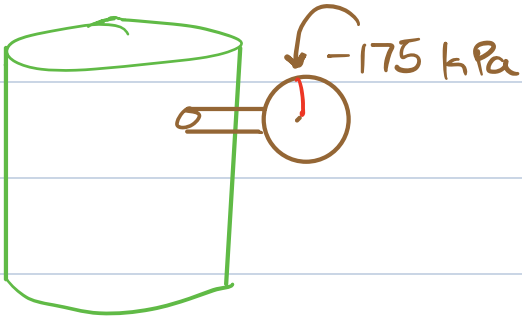
* True or False

< $P = \frac{mg}{A}$

the abs. pressure always be greater than that for gage pressure.

True, the absolute pressure will always be greater than gage pressure because absolute pressure equals gage pressure plus atmospheric pressure. Therefore, on Earth under standard conditions atmospheric pressure will alway be greater than zero and a value greater than zero will be added to the gage pressure to get the absolute pressure.

3.10



* True or False

* Is this possible?

True, this can be obtainable with enough vaccum pressure applied to the tank.

3.11

What is the atmospheric pressure at cockpit?

$\Delta P = \gamma \times h = (0.0764\ ^{lb}/_{ft^3})(4000\ ft)$

$\gamma_{air} = 0.0764\ ^{lb}/_{ft^3}$

$\Delta P = 305.6\ lb/ft^2\ (ft^2/(12in)^2)$

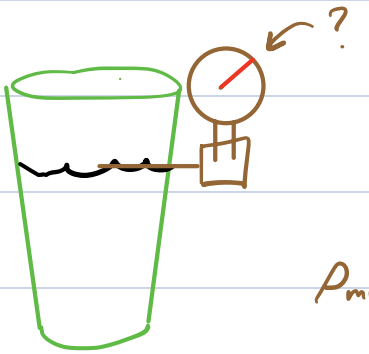
$p = p_{atm} - \Delta p$

$\Delta P = 2.12\ psia$

$p = 14.70 psia - 2.12\ psia$

$p_{atm} = 12.58 psia$

3.13



What is the gage pressure?

$\rho_{milk} = 1.03\ g/mL$

$P_g = \rho h g = (1.03\ g/mL)(0\ m)(9.81\ m/s^2) = 0\ kPa$