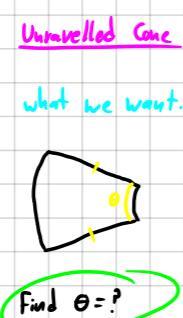
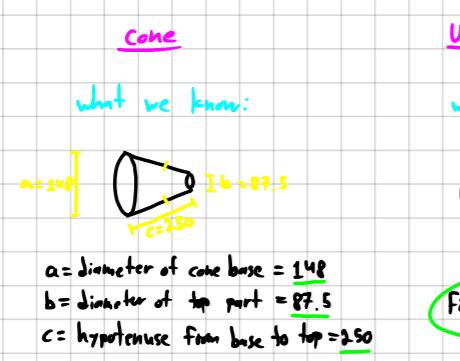
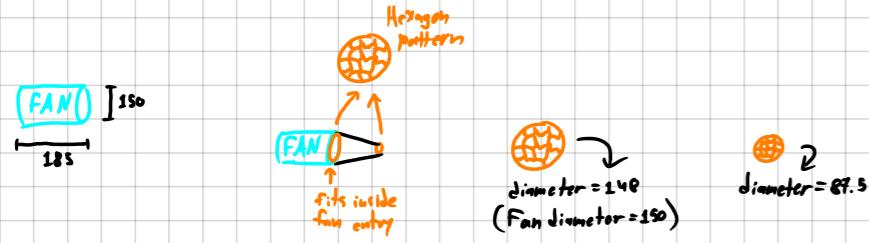
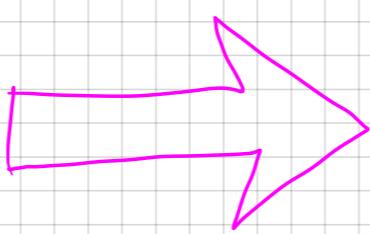


Laminar flow section

Unit of measurement = MM



$$\begin{aligned} a &= 148/2 - 87.5/2 \\ &= 30.35 \\ a &= 30.35 \sqrt{c^2 - b^2} \\ a^2 + b^2 &= c^2 \\ b^2 &= c^2 - a^2 \\ b &= \sqrt{c^2 - a^2} \\ b &= \sqrt{150^2 - 30.35^2} \\ b &= 148 \end{aligned}$$



Cone \rightarrow Unravelled Cone

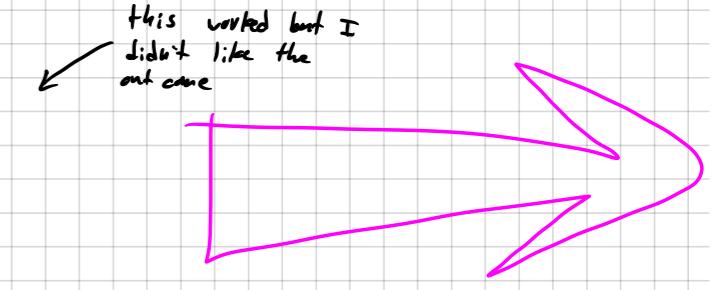
$C_1 = 148$, $C_2 = 87.5$

$C_1 = 2\pi r = 2\pi(148/2) = 463$

$C_2 = 2\pi r = 2\pi(87.5/2) = 275$

$b = 360(74/607.2)$
 $b = 43.88^\circ$

This worked but I didn't like the end cone



$\frac{148}{2} = 74$, $\frac{87.5}{2} = 43.75$

$\cos(\alpha) = \frac{30.35}{150}$
 $\alpha = \cos^{-1}(30.35/150)$
 $\alpha = 83^\circ$

$\sin(21.94) = \frac{a}{607.2}$
 $a = 607.2 \sin(21.94)$
 $a = 226.87$

$\cos(1.94) = \frac{b}{607.2}$
 $b = 607.2 \cos(1.94)$
 $b = 563.22$

$\alpha = 2\pi \sin^{-1}\left(\frac{74}{607.2}\right)$
 $\alpha = 14^\circ$

$a = 453.74$
 $b = 563.22$

$a = 453.74$
 $b = 563.22$
 $c = 607.2$

$\cos(\theta) = \frac{74}{150}$
 $\theta = \cos^{-1}(74/150)$
 $\theta = 78.37^\circ$

$\beta = 180^\circ - 78.37^\circ = 101.63^\circ$

$\cos(\theta) = \frac{74}{150}$
 $\theta = \cos^{-1}(74/150)$
 $\theta = 78.37^\circ$

Cone \rightarrow Unravelled Cone

$C_1 = 2\pi r = 2\pi(148/2) = 463$

$C_2 = 2\pi r = 2\pi(87.5/2) = 275$

$\theta = 23.26^\circ$

$a = 148/2 - 87.5/2 = 30.35$

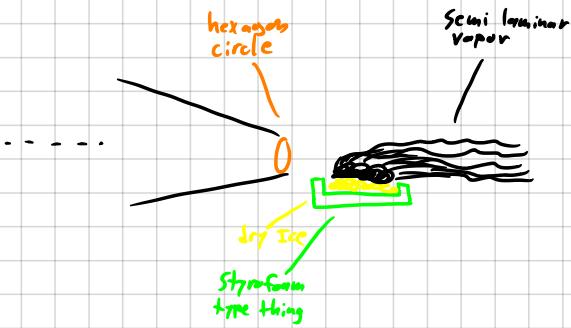
$\cos(\alpha) = 30.35/150$
 $\alpha = \cos^{-1}(30.35/150)$
 $\alpha = 78.37^\circ$

$\beta = 180^\circ - 78.37^\circ = 101.63^\circ$

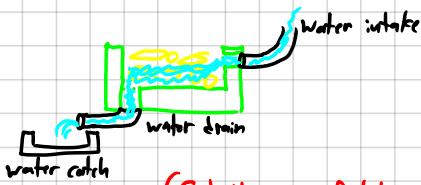
$\alpha / \sin(\beta) = c / \sin(\alpha)$
 $\alpha \cdot \sin(\beta) / \sin(\beta) = c$
 $c = 148 \cdot \sin(101.63^\circ) / \sin(23.26^\circ)$
 $= 367$

$367 - 150 = 217$
 how is that little bit of the mid is longer than the first bit???

Sublimation Section



Note: when adding lake warm water
the vapor volume increases dramatically.
However it dies down within a
few minutes as the water cools



(Find the size of tubing that
works best for slow drain
and intake)

Model section

scale



How to connect the
models to the scale

INTRODUCING: the modelholder



slide the circlethingy into the
modelholder and voilà!

→ Ya I just glued that sambitch to the scale

Topdown side

