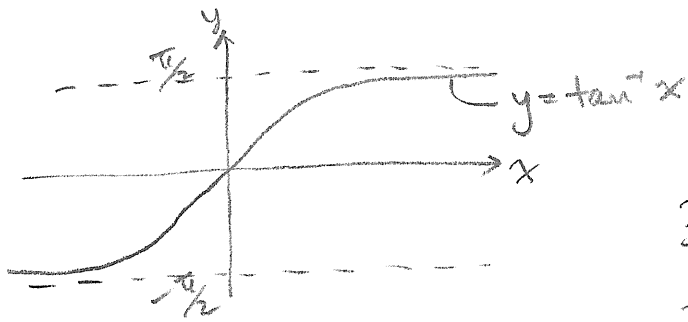


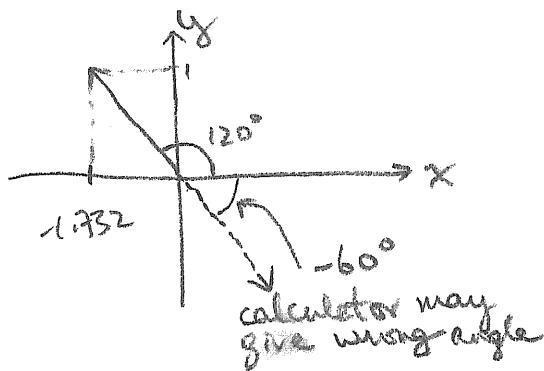
Using a calculator to evaluate
inverse tangent



Because the inverse
tangent function is
bounded by $\pm \frac{\pi}{2}$ ($\pm 90^\circ$)

Using a calculator to
find the inverse tangent
may give you an angle
in the "wrong" quadrant

e.g.



$$\vec{v} = 1 - j1.732$$

converting to polar form:

$$\vec{v} = r \angle \theta$$

where $r = \sqrt{1^2 + (-1.732)^2}$

$$= 2$$

and $\theta = \tan^{-1}\left(\frac{-1.732}{1}\right)$

If evaluate by hand
then $\theta = \tan^{-1}(-1.732)$

$$\theta = -60^\circ$$

Must verify
result by manually
inspecting the vector
diagram and see
if the resulting
angle "makes sense"