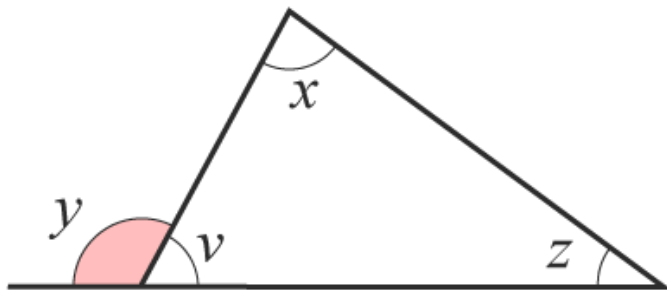


Yttrevinkelsatsen

$$y + v = 180^\circ$$

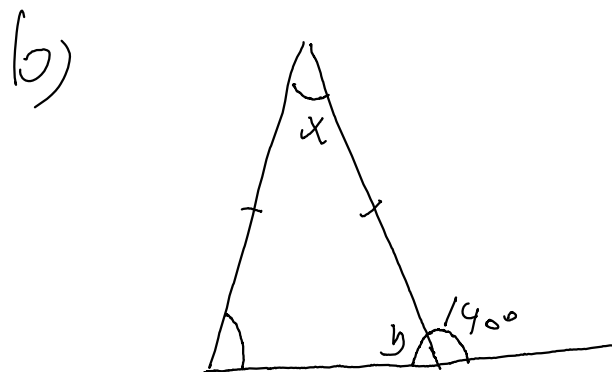
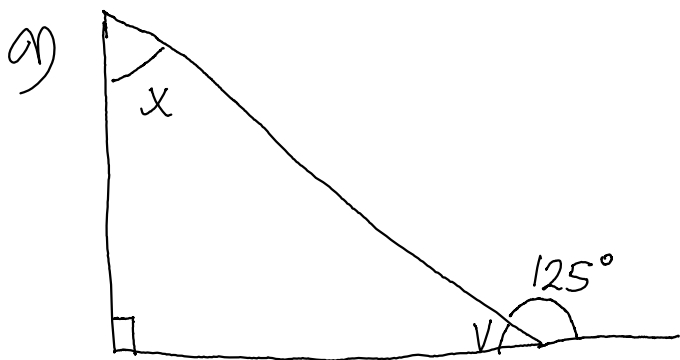
$$\underbrace{x+z+v}_{y} = 180^\circ$$

$$x+z=y \leftarrow \text{yttrevinkelsatsen}$$



om vi förlänger en av sidorna i en triangel kan vi utnyttja yttrevinkelsatsen

Ex) Bestäm x för trianglarna.



Yttrevinkelsatsen:

$$v + 125^\circ = 180^\circ$$

$$x + 90^\circ = 125^\circ$$

$$x = 35^\circ$$

Likbent: $2y + x = 180^\circ$

$$y + 140^\circ = 180^\circ$$

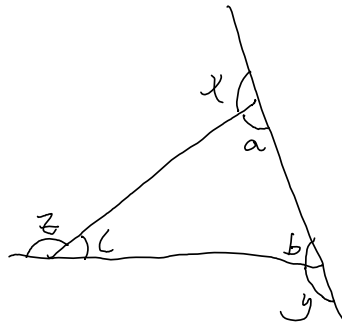
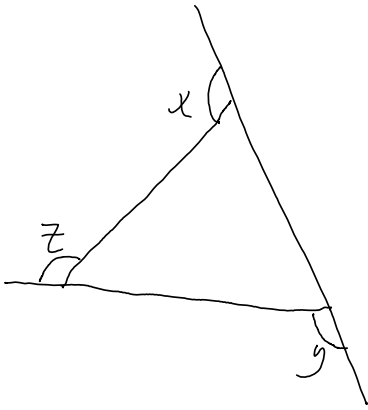
$$y = 40^\circ$$

$$x + y = 140^\circ$$

$$x + 40^\circ = 140^\circ$$

$$x = 100^\circ$$

Ex) Viser att vinkelforman $x+y+z=360^\circ$



ytan vinkelsumser:

$$x+a=180^\circ$$

$$y+b=180^\circ$$

$$z+c=180^\circ$$

Addera samtliga likheter: $x+a+y+b+z+c=180^\circ+180^\circ+180^\circ$

$$x+a+y+b+z+c=540^\circ$$

$$\underbrace{a+b+c}_{180^\circ} + x+y+z=540^\circ$$

en triangel

$$180^\circ + x+y+z=540^\circ$$

$$x+y+z=360^\circ$$

