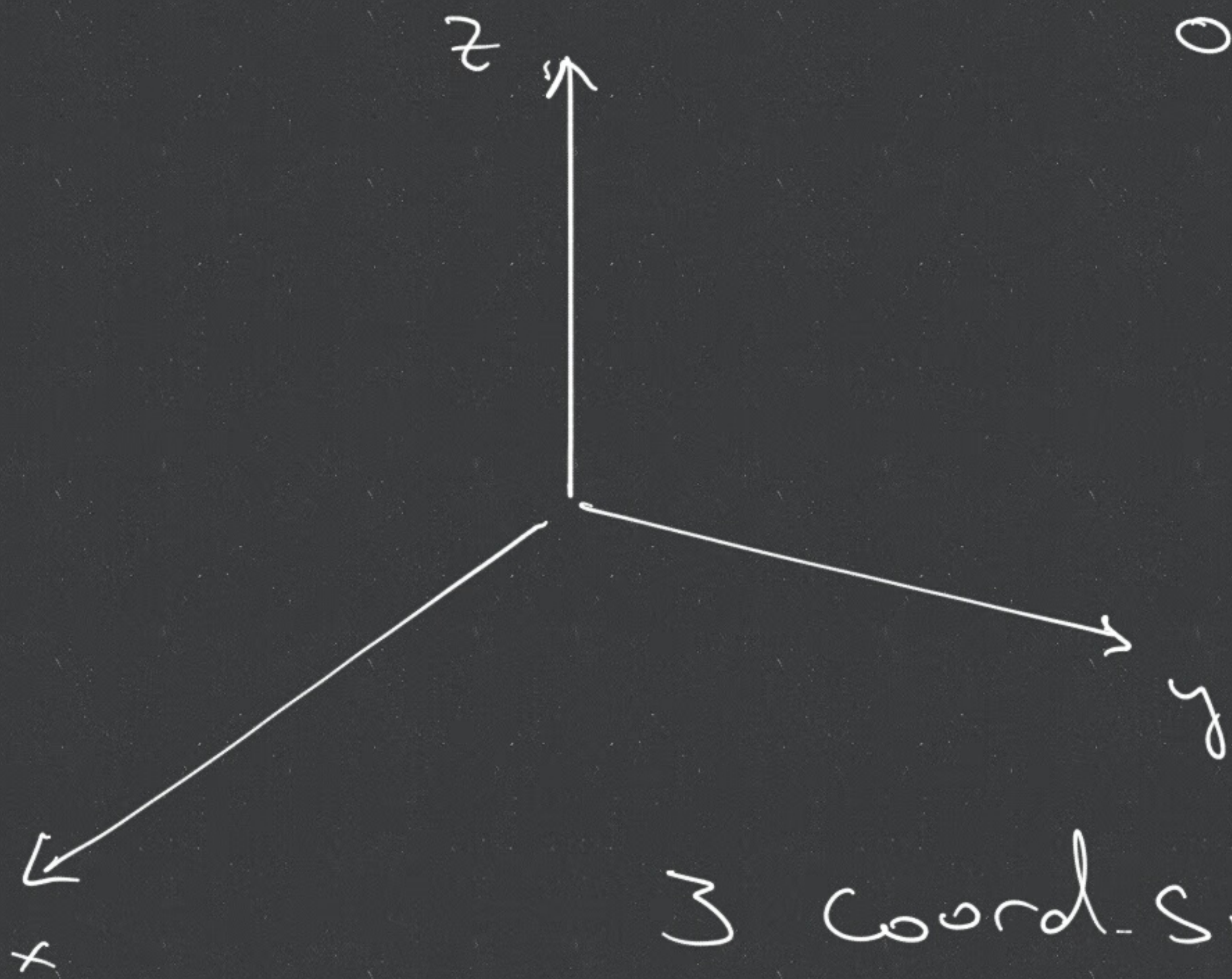
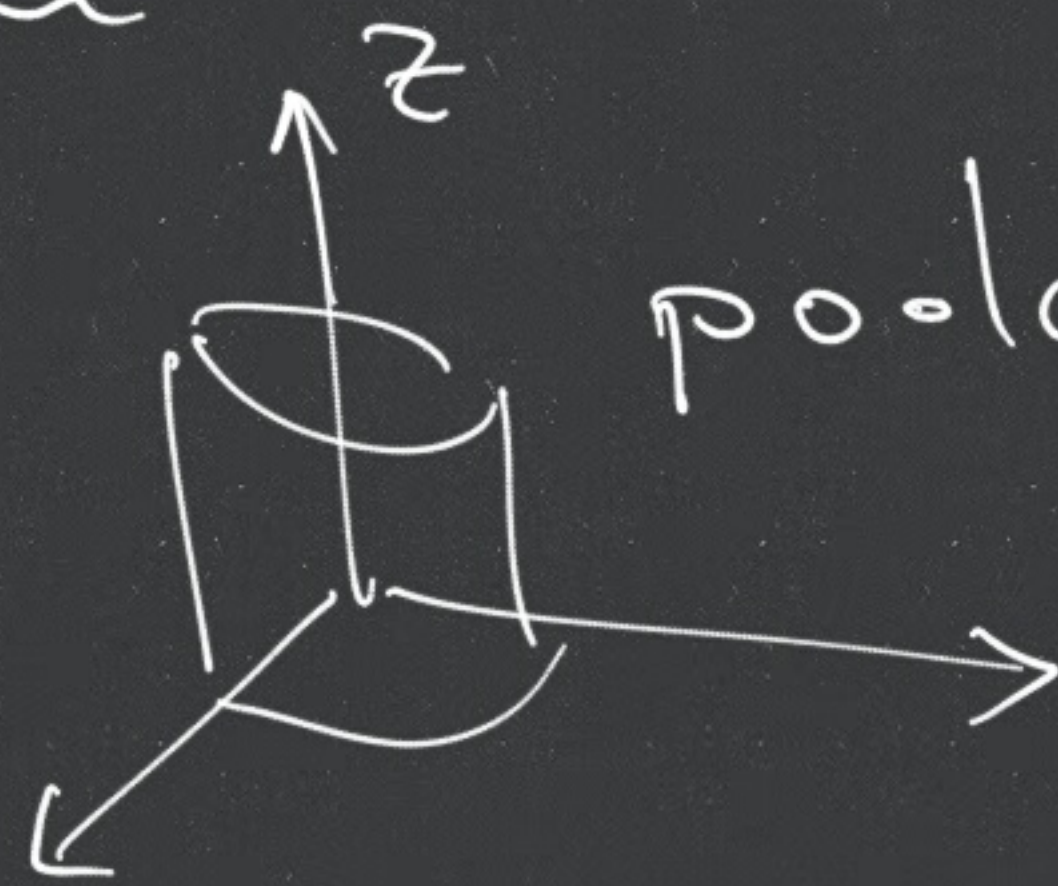


Coord. Systemen in \mathbb{R}^3 orientatie



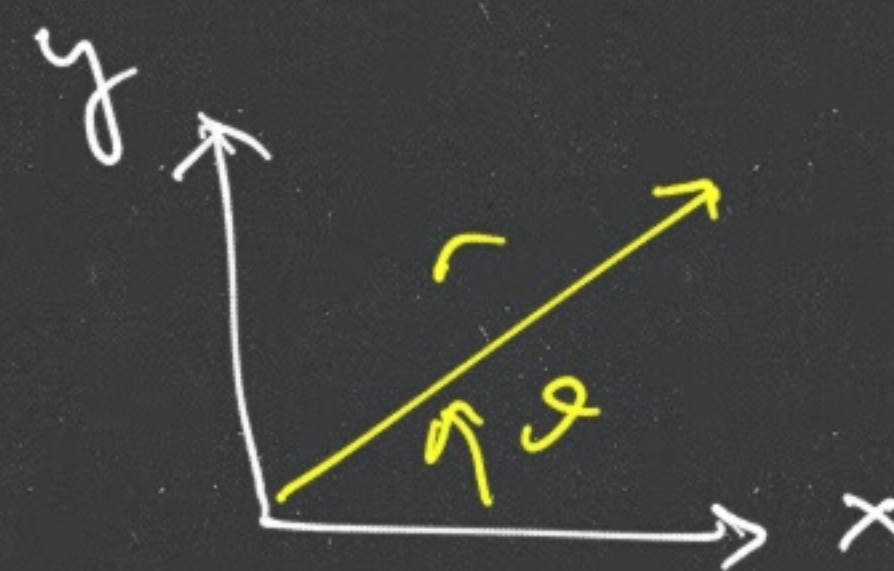
3 coord. systemen

- 1). Rechthoek.
- 2). Cylinderskoord:
- 3). Bolkoord.



Er veel andere mogelijkheden...

\mathbb{R}^2 :



Conversie:

1) van $r, \varphi \rightarrow x, y$:

$$x = r \cos \varphi$$

$$y = r \sin \varphi$$

2) van x, y , naar r, φ

$$r = \sqrt{x^2 + y^2}$$

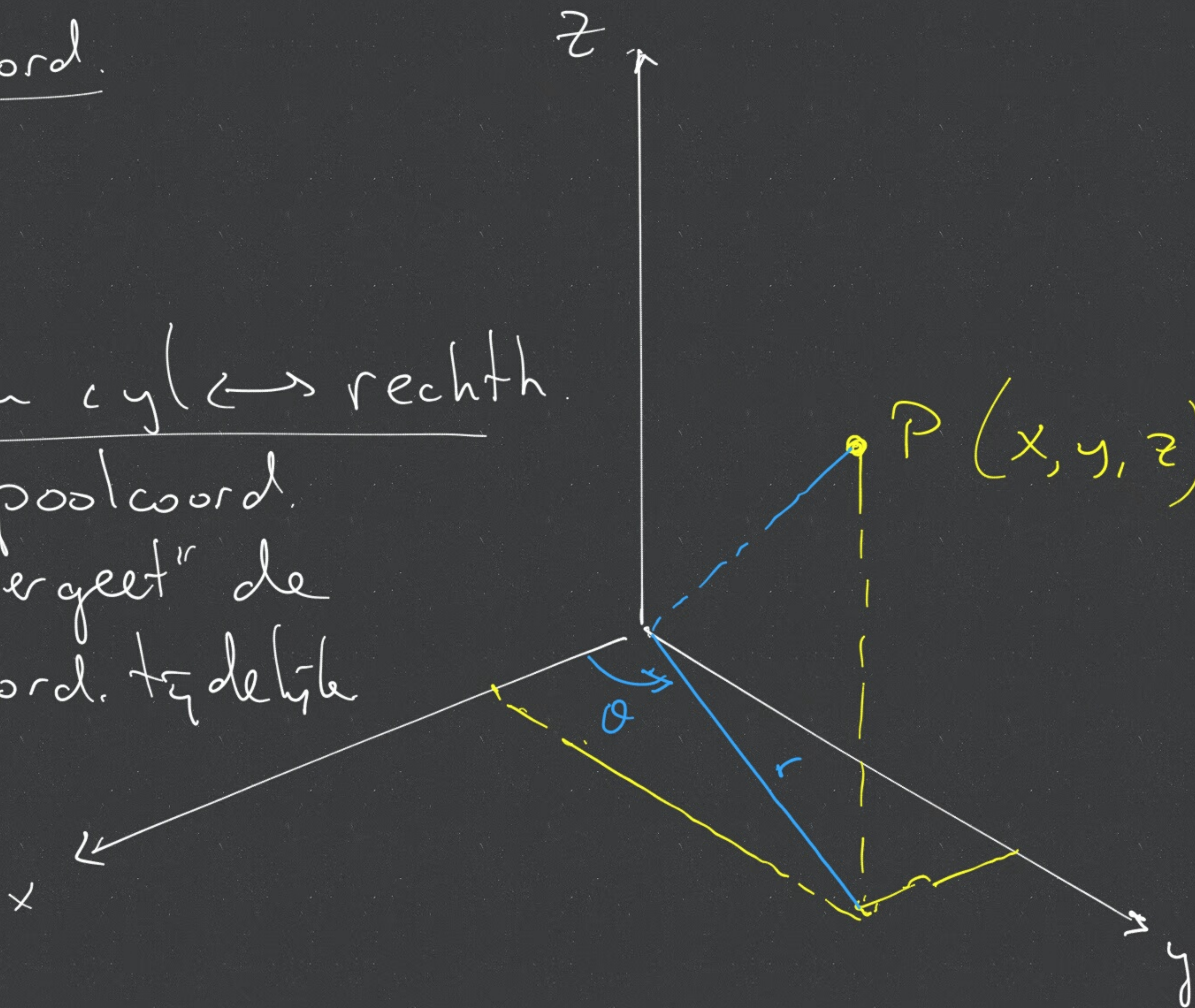
$$\tan \varphi = y/x$$

M.A.P.

Cylindercoord.

Omrekenen cyl \leftrightarrow rechth.

zie poolcoord.
en "vergeet" de
z coord. te delen



Beschrijven van objecten.

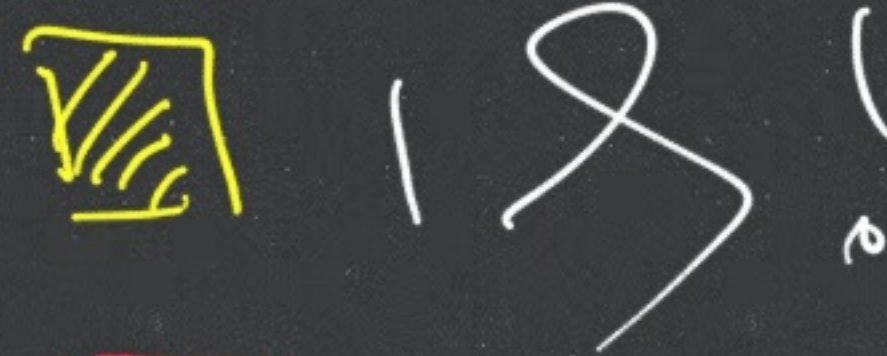
VB. Stelsel vergelijkingen

$$\begin{cases} z = r \\ z = 1 + r \cos \alpha \end{cases}$$

3 dim: r, α, z

$3 - 2 = 1$ dim. object.

Hoeverel dims heeft het object?



Cyl.

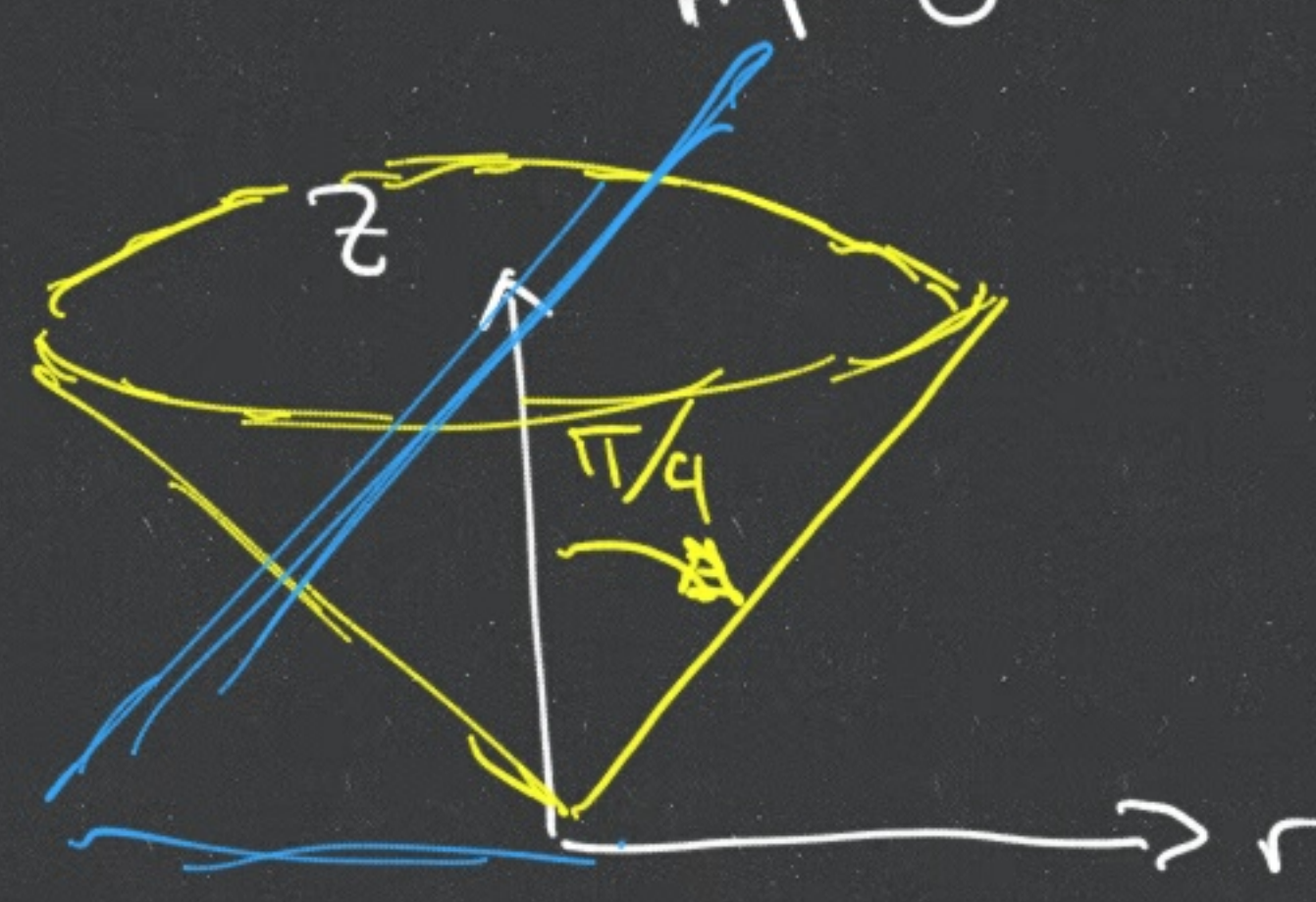
$$\begin{cases} z = r \\ z = 1 + r \cos \vartheta \end{cases}$$

z beschrijvingen
 ↳ object

Rechthoek.

$$\begin{cases} z = \sqrt{x^2 + y^2} \\ z = 1 + x \end{cases}$$

- $z = r$
 ϑ komt er niet in voor
 rotatiesymmetrie om z-as

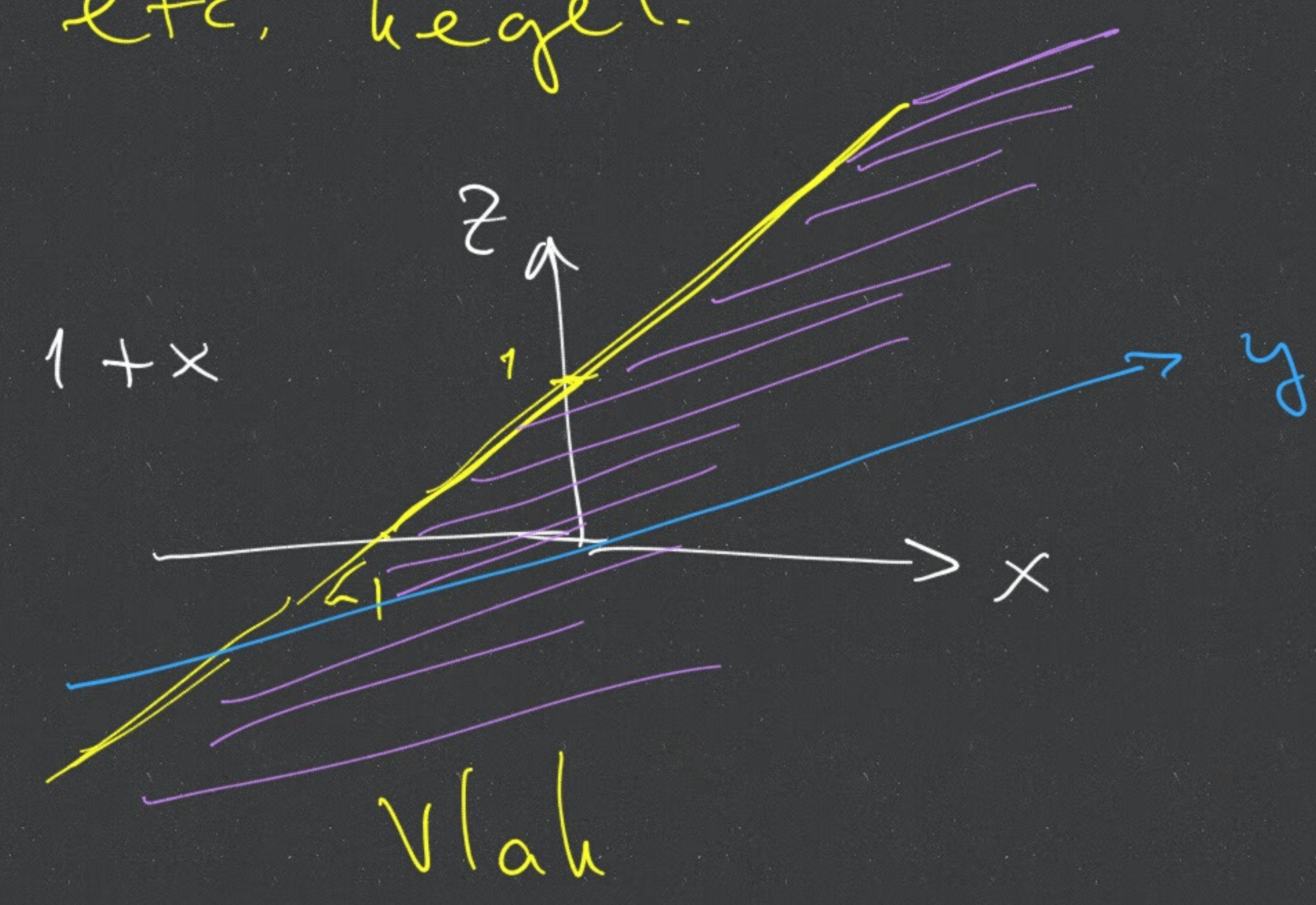


(r-as? nou ja, neem de x-as waar)

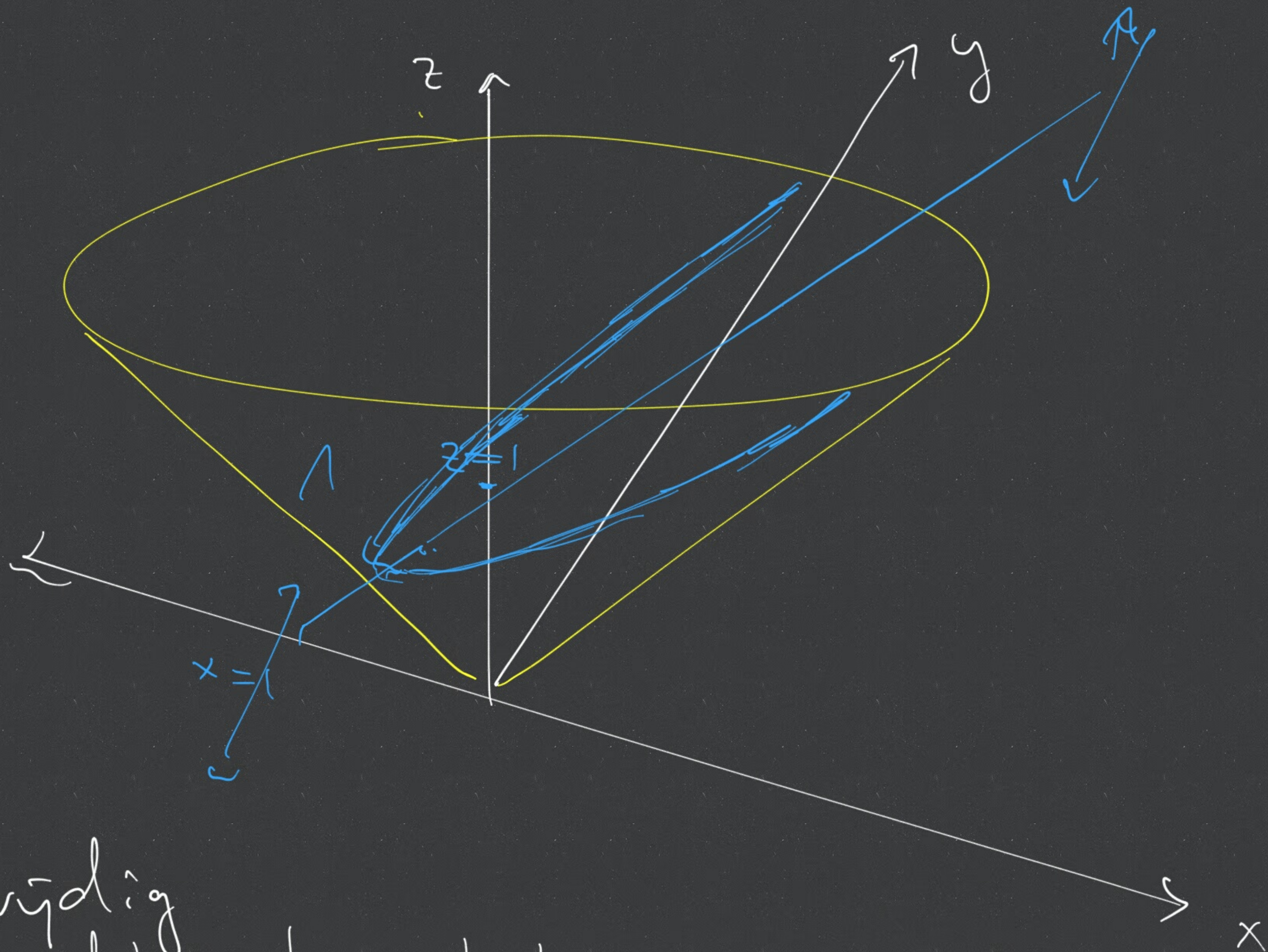
- $z = 1 + r \cos \vartheta$

- Neem $y = 0$
 $z = \sqrt{x^2 + y^2} = \sqrt{x^2} = |x|$
 etc; kegel.

- $z = 1 + x$



vlak



NB:

Het snijvlak

staat evenwijdig

aan de zijde vd hegel in het pos. zx -vlak