



#MYSKOOL

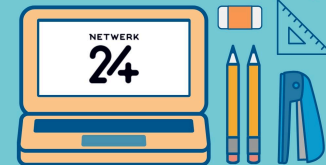
AANLYN HULP

vir hoërskoolleerlinge



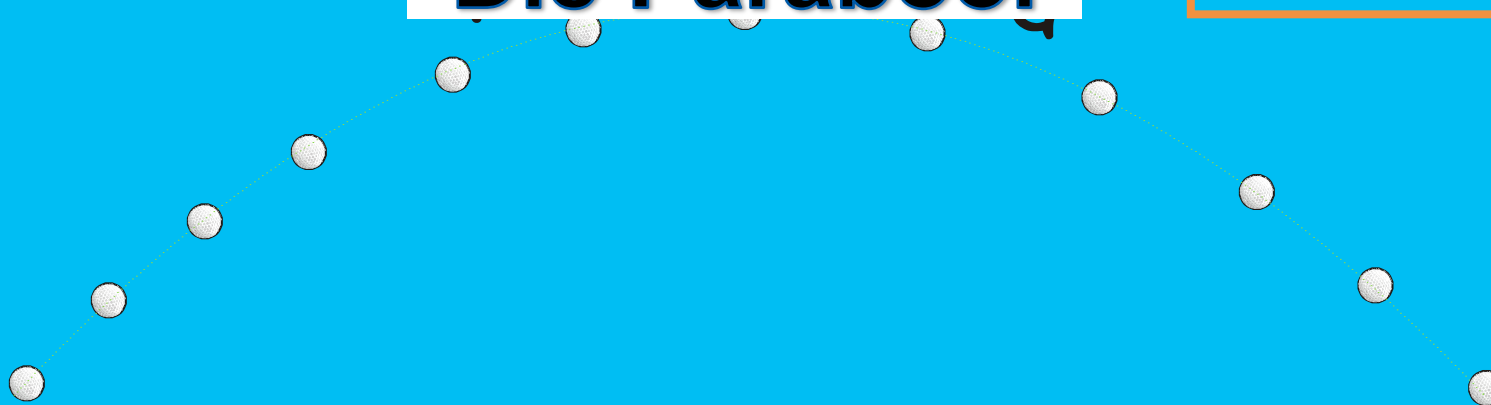
WISKUNDE

Die parabool



Die Parabool

$$y = ax^2$$

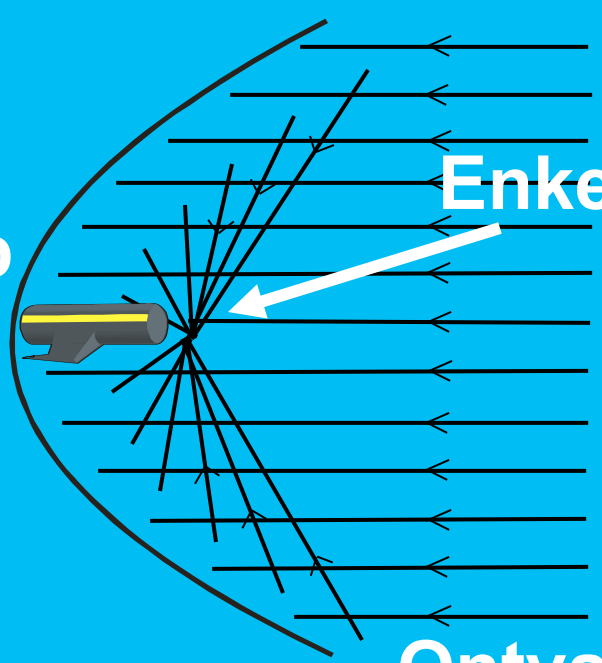
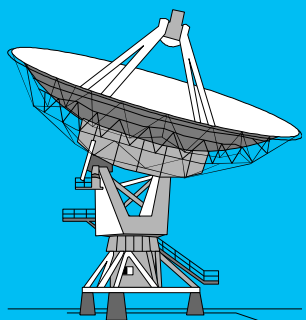


Pad van 'n bewegende voorwerp

Die Parabool

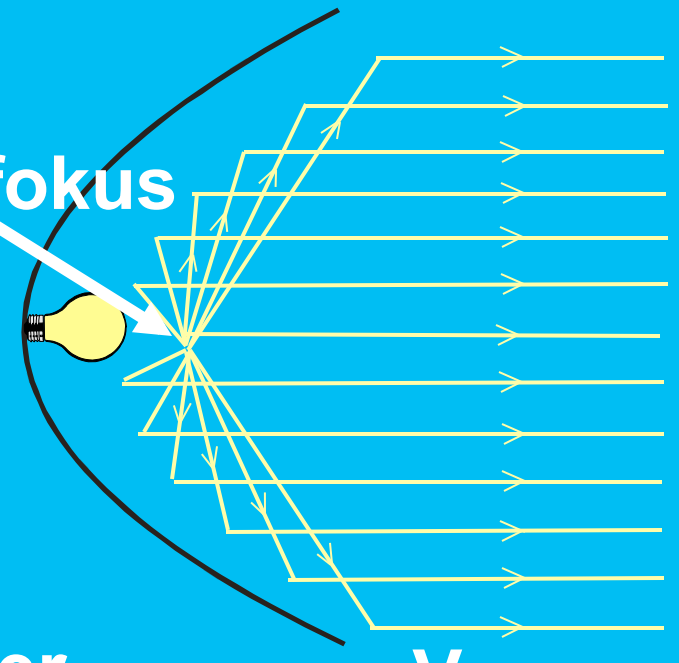
$$y = ax^2$$

Radio-teleskoop

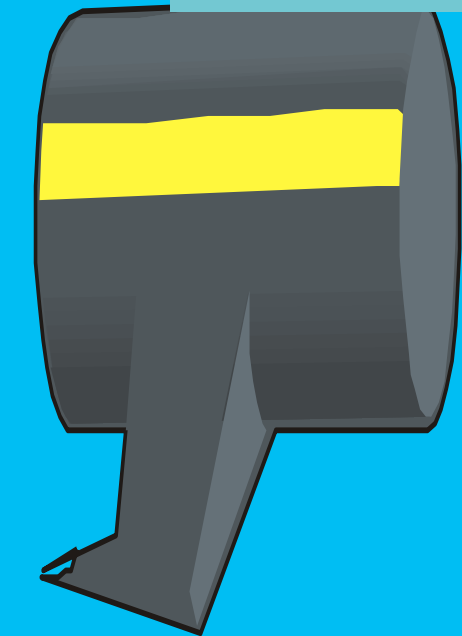


Ontvanger

Enkel-fokus



Versender



Satelietskottel

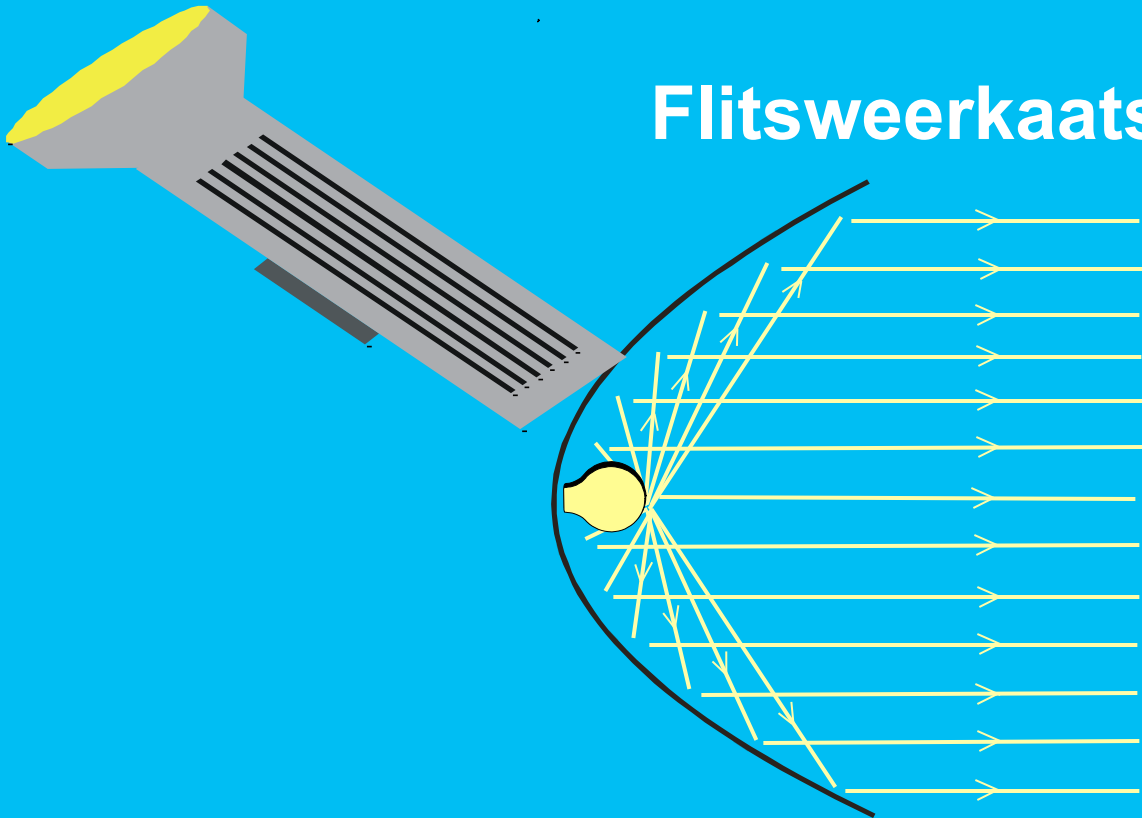
'n Paraboliese toestel het 'n enkele fokuspunt. Dit help dat straling ontvang en versterk of versend en versterk word.

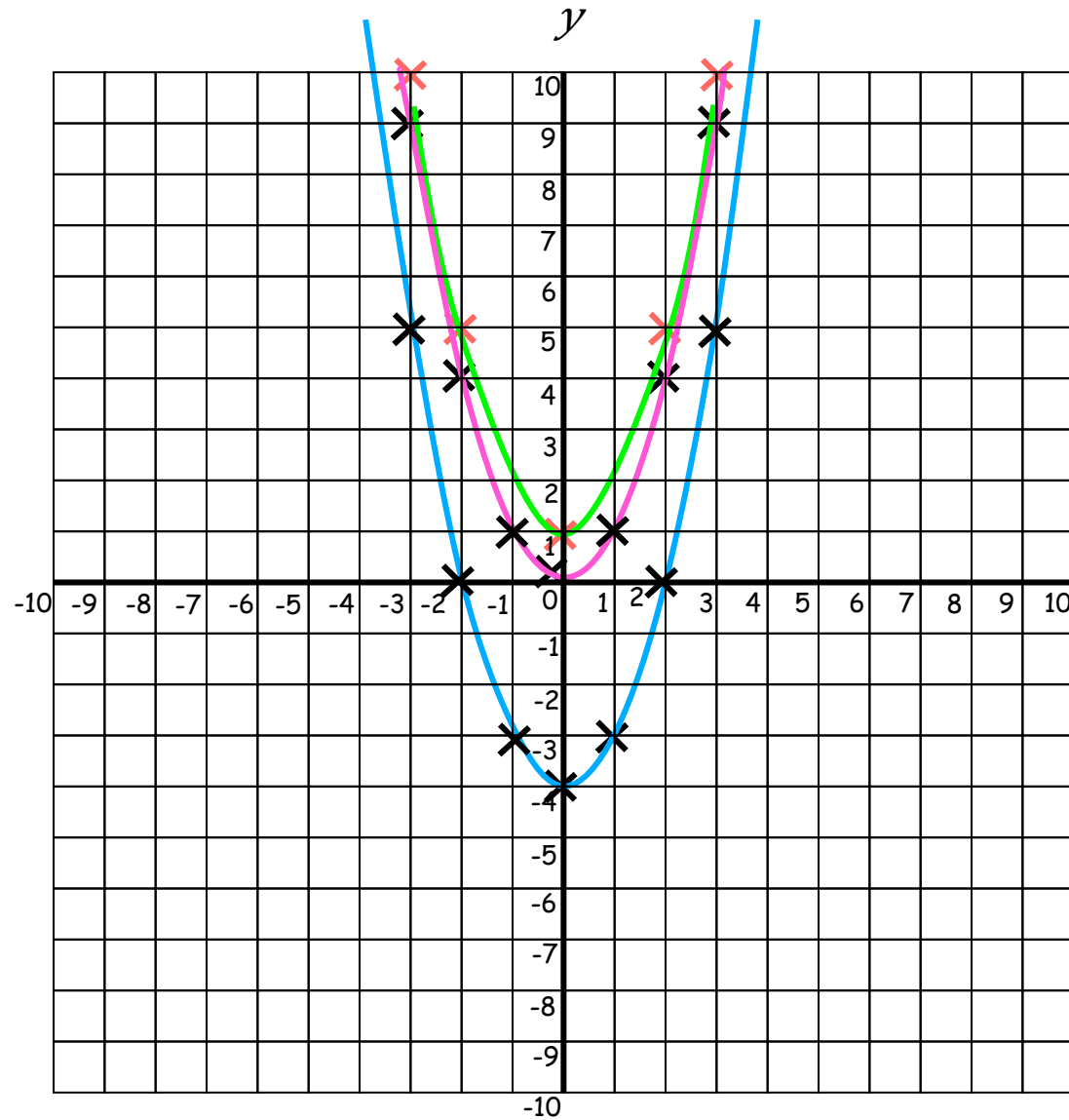
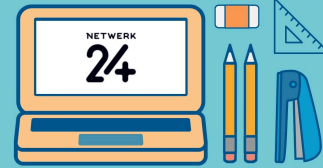
Die Parabool

$$y = ax^2$$



Flitsweerkatser



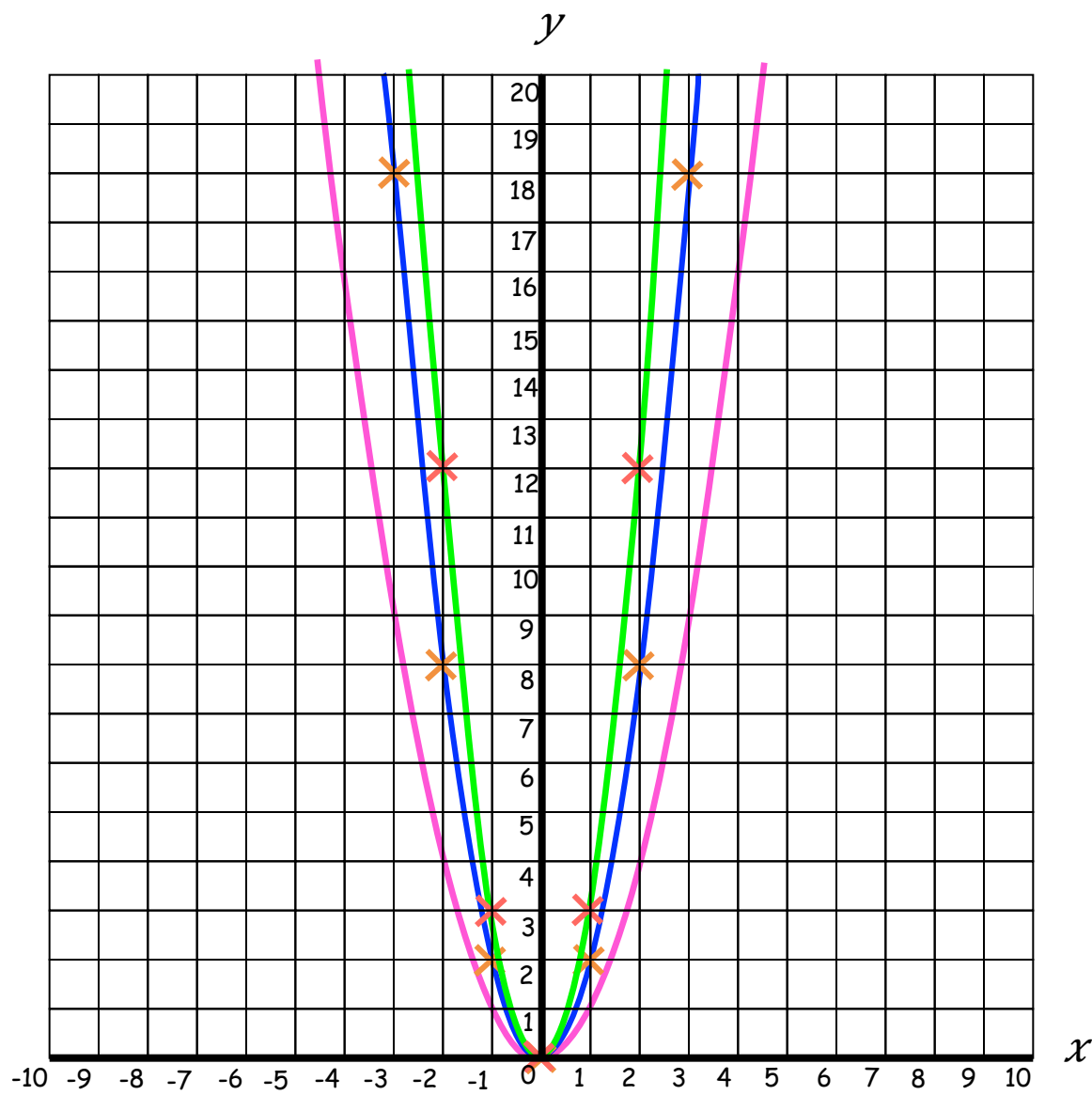


$y = x^2$

$y = x^2 - 4$

$y = x^2 + 1$



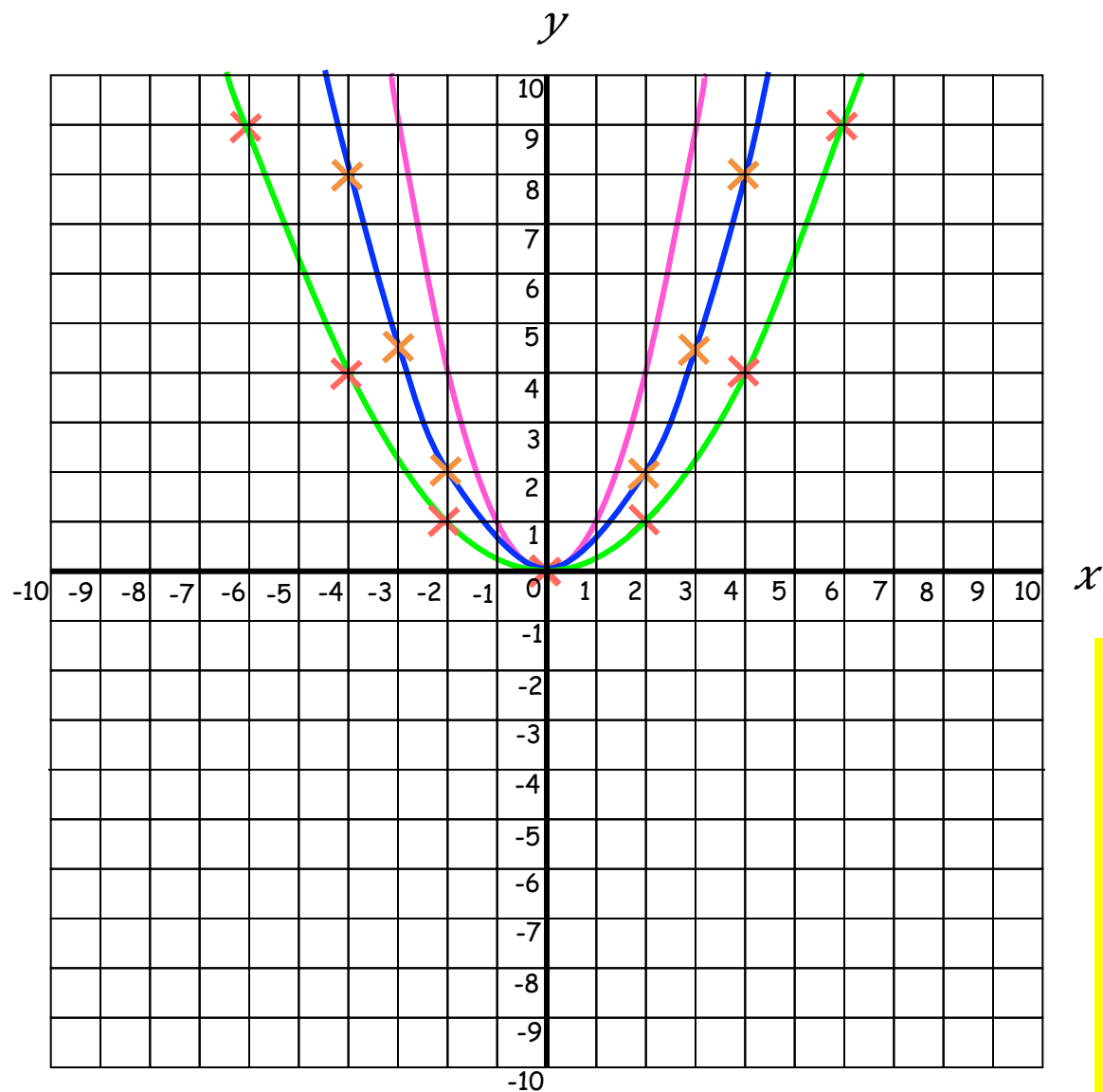


$y = x^2$

$y = 2x^2$

$y = 3x^2$

As die koëffisiënt van x^2 groter word, word die kurwe nouer in die x -rigting nader na die y -as .



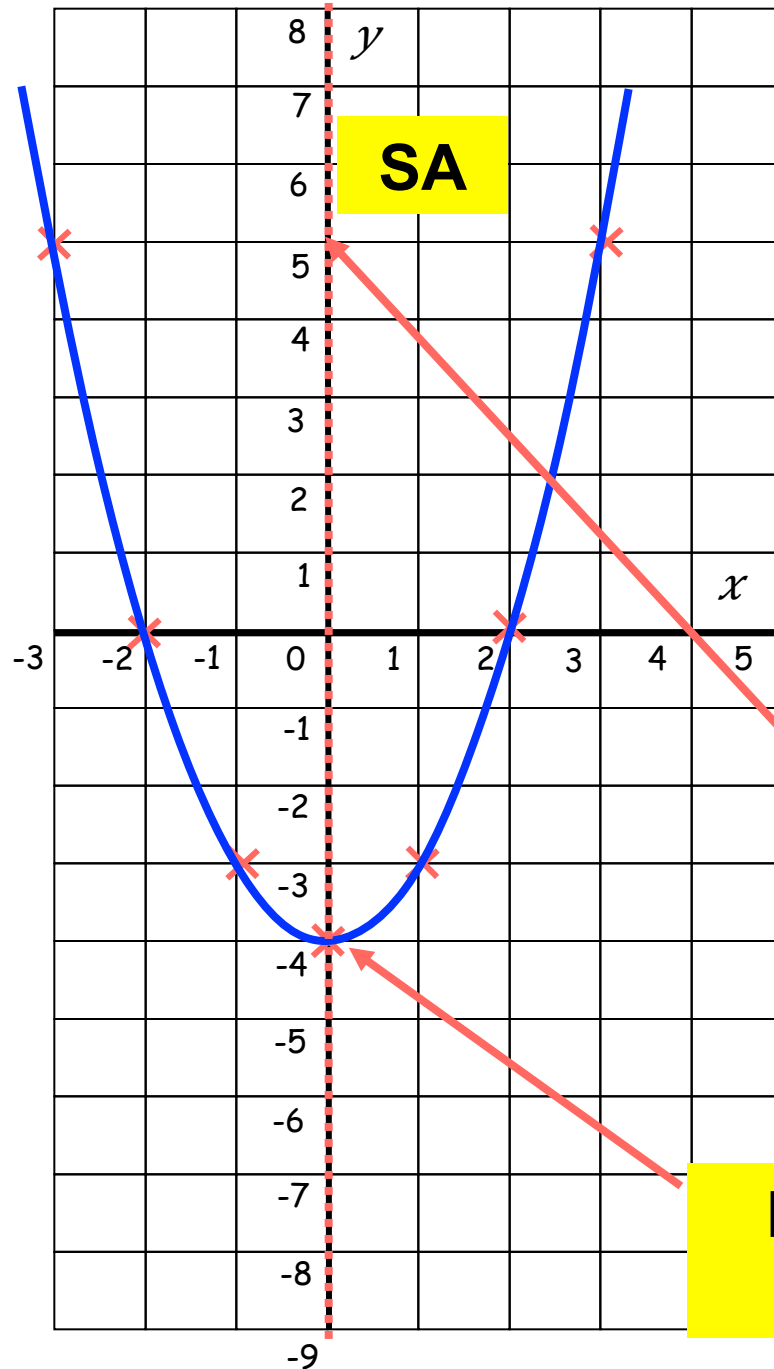
$y = x^2$

$y = \frac{1}{2}x^2$

$y = \frac{1}{4}x^2$

As die koëffisiënt van x^2 kleiner word, word die kurwe wyer. Dit rek in die x -rigting weg vanaf die y -as.

Teken die kwadratiese grafiek van $y = x^2 - 4$

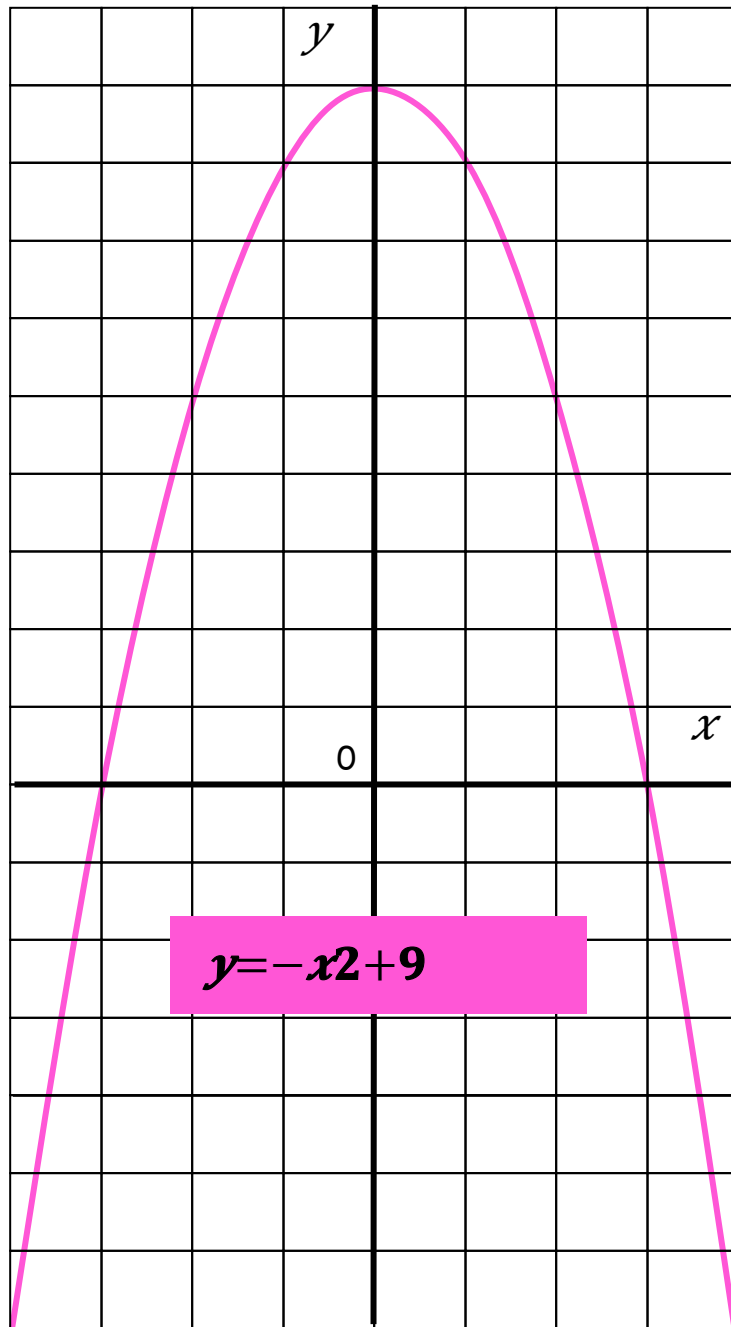


x	-3	-2	-1	0	1	2	3
y	5	0	-3	-4	-3	0	5

Vergelyking van Simmetrie-as is $x=0$

Draaipunt (minimum) by $(0; -4)$

'n
Negatiewe
 x^2 -term
keer die
kurwe om.



Gegee die grafiek van
 $y = -x^2 + 9$

- Skryf die koördinate van die draaipunt neer.
- Skryf die koördinate van die x afsnitte neer.
- Skryf die vergelyking van die simmetrie-as neer.
- Vind die waarde van y as $x = 4$.
- Vind die waardes van x as $y = 5$.

a) (0 ; 9)

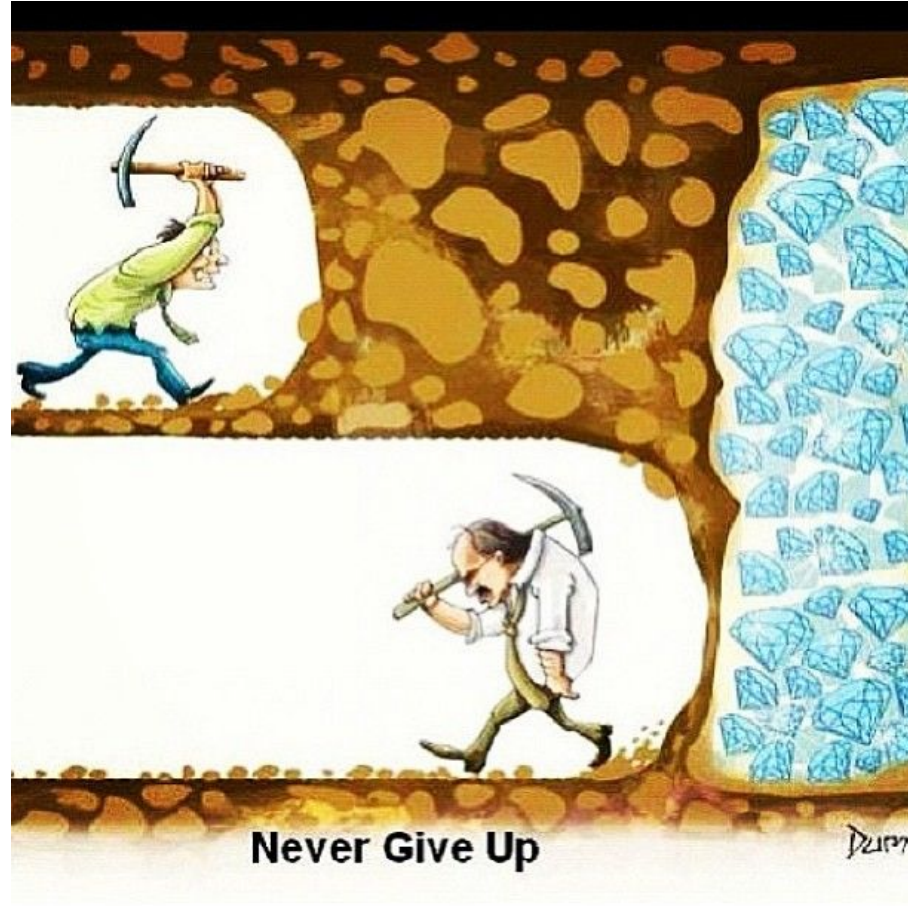
c) $x = 0$

e) $x = 2$ of $x = -2$

b) (3 ; 0) (-3 ; 0)

d) $y = -7$





**Jy KAN dit doen! Glo in
JOUSELF!**

