nr 5 p 99 : gebruik de resultaten van nr 4

f_1 a) $f_1(x) = -3x + 5$ $\quad P(1,2)$

$f_1'(1) = -3$

vgl t in $P(1,2)$: $y - y_1 = m(x - x_1)$

$\downarrow \quad \| \quad \downarrow$

$2 \quad -3 \quad 1$

want per definitie is reico raaklyn gelijk aan $f_1'(1)$

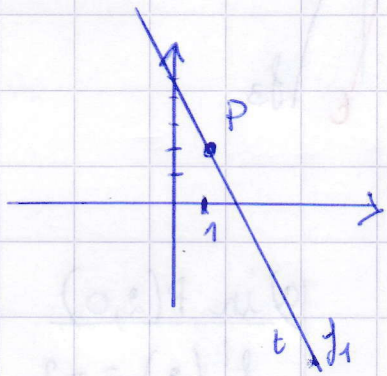
t : $y - 2 = -3(x - 1)$

$y - 2 = -3x + 3$

$y = -3x + 3 + 2$

t : $y = -3x + 5$

b) GRM



zoom: zstandaard

raaklyn t in $P(1,2)$ valt samen met f_1

f_2 a) $f_2(x) = x^2 - 5x + 6$ $\quad$ in $P(-2,20)$

$f_2'(-2) = -9$

vgl t in $P(-2,20)$: $y - y_1 = m(x - x_1)$

$\downarrow \quad \downarrow \quad \downarrow$

$20 \quad -9 \quad -2$

want reico raaklyn is $f_2'(-2)$

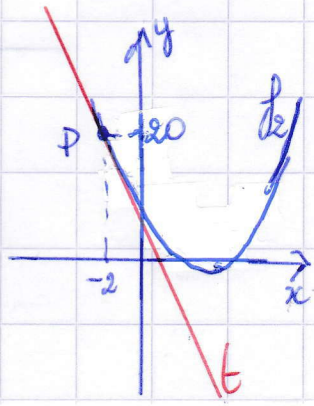
t : $y - 20 = -9(x + 2)$

$y = -9x - 18 + 20$

$y = -9x + 2$

b) GRM : venster bv x-as : -10 tot 10

y-as : -30 tot 30



f_3 a) $f_3(x) = -x^3 + x^2 - x$ in $P(-1, 3)$

$f_3'(-1) = -6$

$t: \; y - y_1 = m(x - x_1)$

$\downarrow \quad \downarrow \quad \downarrow$

$3 \quad -6 \quad -1$

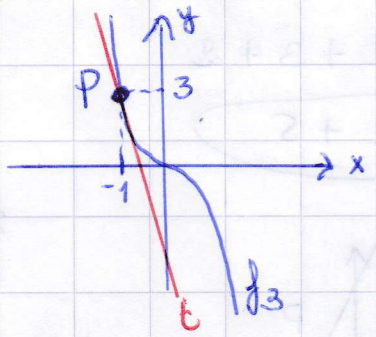
$t: \; y - 3 = -6(x + 1)$

$y - 3 = -6x - 6$

$\boxed{y = -6x - 3}$

b) GRM: $\begin{cases} y_1 = -x^2 + x^2 - x \\ y_2 = -6x - 3 \end{cases}$ + zoom : zstandard

schets:



f_4 a) $f_4(x) = -x^2 + 2x$

a) in $P(0,0)$

$f_4'(0) = 2$

$t_1: \; y - 0 = 2(x - 0)$

$\boxed{y = 2x}$

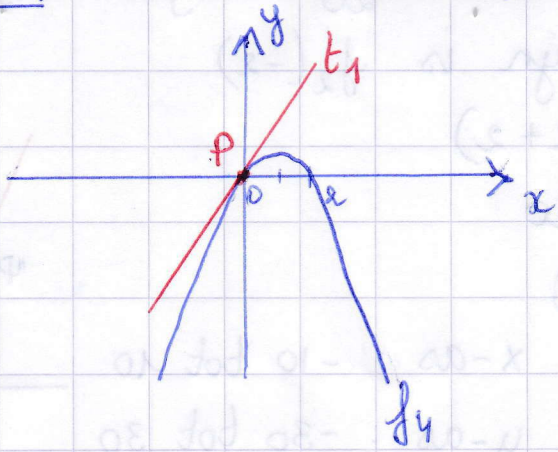
a) in $P(2,0)$

$f_4'(2) = -2$

$t_2: \; y - 0 = -2(x - 2)$

$\boxed{y = -2x + 4}$

b) GRM zoom: zstandard



b) GRM