nr 10 p 100

a) $f(x) = x^2$

* $f'(x) = 2x$ $\quad 2x = 1 \Leftrightarrow x = \frac{1}{2}$ $\quad f(\frac{1}{2}) = \frac{1}{4}$

dus in $P(\frac{1}{2}, \frac{1}{4})$

* $2x = 0 \Leftrightarrow x = 0 \Rightarrow f(0) = 0$

dus in $P(0,0)$

* $2x = -2 \Leftrightarrow x = -1 \Rightarrow f(-1) = 1$

dus in $P(-1, 1)$

b) $f(x) = \sqrt{x}$ $\quad f'(x) = \frac{1}{2\sqrt{x}}$

* $\frac{1}{2\sqrt{x}} = 1 \Leftrightarrow 2\sqrt{x} = 1 \Leftrightarrow \sqrt{x} = \frac{1}{2}$

$\Leftrightarrow x = \frac{1}{4}$

$f(\frac{1}{4}) = \sqrt{\frac{1}{4}} = \frac{1}{2}$

dus in $P(\frac{1}{4}, \frac{1}{2})$

* $\frac{1}{2\sqrt{x}} = 0$ kan niet!

* $\frac{1}{2\sqrt{x}} = -1$ " "

niet

c) $h(x) = \sin x$ $\quad h'(x) = \cos x$

* $\cos x = 1 \Leftrightarrow x = k2\pi \Rightarrow f(x) = 0$

$P(k2\pi, 0)$ $\quad k \in \mathbb{Z}$

* $\cos x = 0 \Leftrightarrow \begin{cases} x = \frac{\pi}{2} + k2\pi \Rightarrow f(x) = 1 \\ x = -\frac{\pi}{2} + k2\pi \Rightarrow f(x) = -1 \end{cases}$

$(\Leftrightarrow x = \frac{\pi}{2} + k\pi)$

dus in $P(\frac{\pi}{2} + k2\pi, 1)$ en $P'(-\frac{\pi}{2} + k2\pi, -1)$

$k \in \mathbb{Z}$

* $\cos x = -1 \Leftrightarrow x =$ / cos tss -1 en 1 !