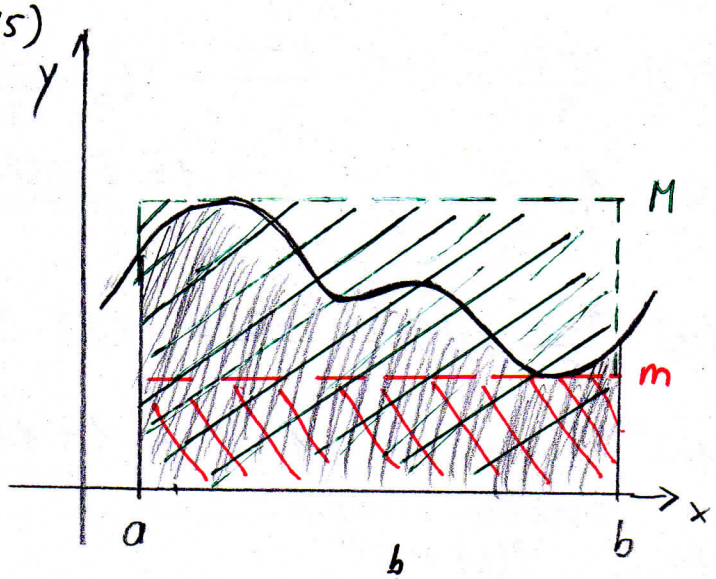
Nr. 15)



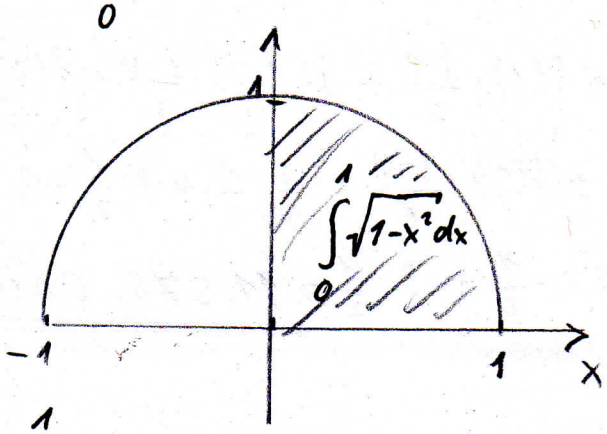
$\widehat{=} \int_0^b f(x)\,dx$

$\widehat{=} m \cdot (b-a)$

$\widehat{=} M \cdot (b-a)$

$$\Rightarrow m(b-a) \leq \int_0^b f(x)\,dx \leq M \cdot (b-a)$$

Nr. 16) $\int_0^1 \sqrt{1-x^2}\,dx$



$\int_0^1 \sqrt{1-x^2}\,dx$ entspricht dem Flächeninhalt des Viertelkreises mit dem Radius 1.

$$\Rightarrow \int_0^1 \sqrt{1-x^2}\,dx = 1^2 \cdot \pi \cdot \frac{1}{4} = \frac{\pi}{4}$$

0. Fell