

Nr. 4) a)  $A = 1$ ;  $p = \tilde{\pi} \Rightarrow b = \frac{2\tilde{\pi}}{\tilde{\pi}} = 2$

$f(x) = 1 \cdot \sin(2x)$

b)  $A = 1$ ;  $\frac{3}{2}p = \tilde{\pi} \Rightarrow p = \frac{2}{3}\tilde{\pi} \Rightarrow b = \frac{2\tilde{\pi}}{\frac{2}{3}\tilde{\pi}} = 3$

$f(x) = -1 \cdot \sin(3x)$

c)  $A = 1$ ;  $\frac{1}{2}p = 2\tilde{\pi} \Rightarrow p = 4\tilde{\pi} \Rightarrow b = \frac{2\tilde{\pi}}{4\tilde{\pi}} = \frac{1}{2}$

$f(x) = 1 \cdot \sin\left(\frac{1}{2}x\right)$

d)  $A = 1$ ;  $p = 4 \Rightarrow b = \frac{2\tilde{\pi}}{4} = \frac{1}{2}\tilde{\pi}$

$f(x) = 1 \cdot \sin\left(\frac{1}{2}\tilde{\pi} \cdot x\right)$

e)  $A = 1,5$ ;  $p = 2 \Rightarrow b = \frac{2\tilde{\pi}}{2} = \tilde{\pi}$

$f(x) = 1,5 \cdot \sin(\tilde{\pi} \cdot x)$

f)  $A = 0,5$  an der  $x$ -Achse gespiegelt

$\frac{1}{2}p = 4 \Rightarrow p = 8 \Rightarrow b = \frac{2\tilde{\pi}}{8} = \frac{1}{4}\tilde{\pi}$

$f(x) = -0,5 \cdot \sin\left(\frac{1}{4}\tilde{\pi} \cdot x\right)$