S 153 Nr 1

a) $f(x) = 2 \sin(3x) \Rightarrow$ Amplitude $a = 2$

Periode $p = \frac{2\pi}{3} = \frac{2}{3}\pi$

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b) $f(x) = 3 \sin(0{,}5x) \Rightarrow a = 3$

$p = \frac{2\pi}{0{,}5} = 4\pi$

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c) $f(x) = 0{,}1 \sin(100x) \Rightarrow a = 0{,}1$

$p = \frac{2\pi}{100} = \frac{1}{50}\pi$

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d) $f(x) = -2 \sin(x-2) \Rightarrow a = |-2| = 2$

$p = \frac{2\pi}{1} = 2\pi$

sin Funktion um 2 LE nach rechts verschoben

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e) $f(x) = 0{,}5 \cdot \sin(4 \cdot (x-3)) \Rightarrow a = 0{,}5$

$p = \frac{2\pi}{4} = \frac{1}{2}\pi$

3 LE nach rechts verschoben

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f) $f(x) = -\sin(4(x+0{,}2)) \Rightarrow a = |-1| = 1$

$p = \frac{2\pi}{4} = \frac{1}{2}\pi$

S 153 Nr 2

a) $f(x) = \sin(bx)$, $p = \pi \Rightarrow p = \frac{2\pi}{b} = \pi \Rightarrow \underline{b = 2}$

b) $f(x) = \sin(bx)$, $p = 4\pi \Rightarrow p = \frac{2\pi}{b} = 4\pi \Rightarrow \underline{b = \frac{1}{2}}$

c) $f(x) = \sin(bx)$; $p = 3 \Rightarrow p = \frac{2\pi}{b} = 3 \Rightarrow \underline{b = \frac{2}{3}\pi}$

d) $f(x) = \sin(\frac{x}{b})$; $p = 2 \Rightarrow p = \frac{2\pi}{\frac{1}{b}} = 2 \Rightarrow b \cdot 2\pi = 2 \Rightarrow \underline{b = \frac{1}{\pi}}$

e) $f(x) = \sin(b(x-2))$; $p = 2\pi \Rightarrow p = \frac{2\pi}{b} = 2\pi \Rightarrow \underline{b = 1}$

f) $f(x) = -\sin(\frac{x}{2b})$; $p = \pi \Rightarrow p = \frac{2\pi}{\frac{1}{2b}} = \pi \Rightarrow 4b\pi = \pi \Rightarrow \underline{b = \frac{1}{4}}$