Work Assignment, Friday, 5th June 2020

Please complete the following tasks conscientiously and reliably. For some of the exercises you'll have video tutorials.

However, in some cases you'll receive handwritten solutions. You can find everything you need to know on the following website: www.aleph-null.li

Today's work assignment consists of the following task.

Task 1:
Please watch the introduction video about the fourth sine and cosine transformation

$$f(x) = \sin(bx) \qquad \text{and} \qquad f(x) = \cos(bx)$$

and try to understand the relationship between the period length (PL) and the coefficient $b \Rightarrow PL = \frac{2\pi}{b}$. Please take notes.

Task 2:
Now please watch the introduction video about the four transformations all combined.

$$f(x) = a\sin(b(x-c)) + d \qquad \text{and} \qquad f(x) = a\cos(b(x-c)) + d$$

a: the amplitude

b: linked to the period length $PL = \frac{2\pi}{b}$ (**Important**: b is not the PL it is only linked to it)

c: horizontal translation

d: vertical translation

Please take notes.

Task 3:
Please solve exercise 1a), b), c) and 2 of the new work sheet.

After every exercise watch the video tutorial. Please take notes if necessary.

Best of luck – have fun.

Sven Huber