

# TRANSFORMATIONS OF TRIG FUNC Thu 23 May 2019

## Vertical Dilation

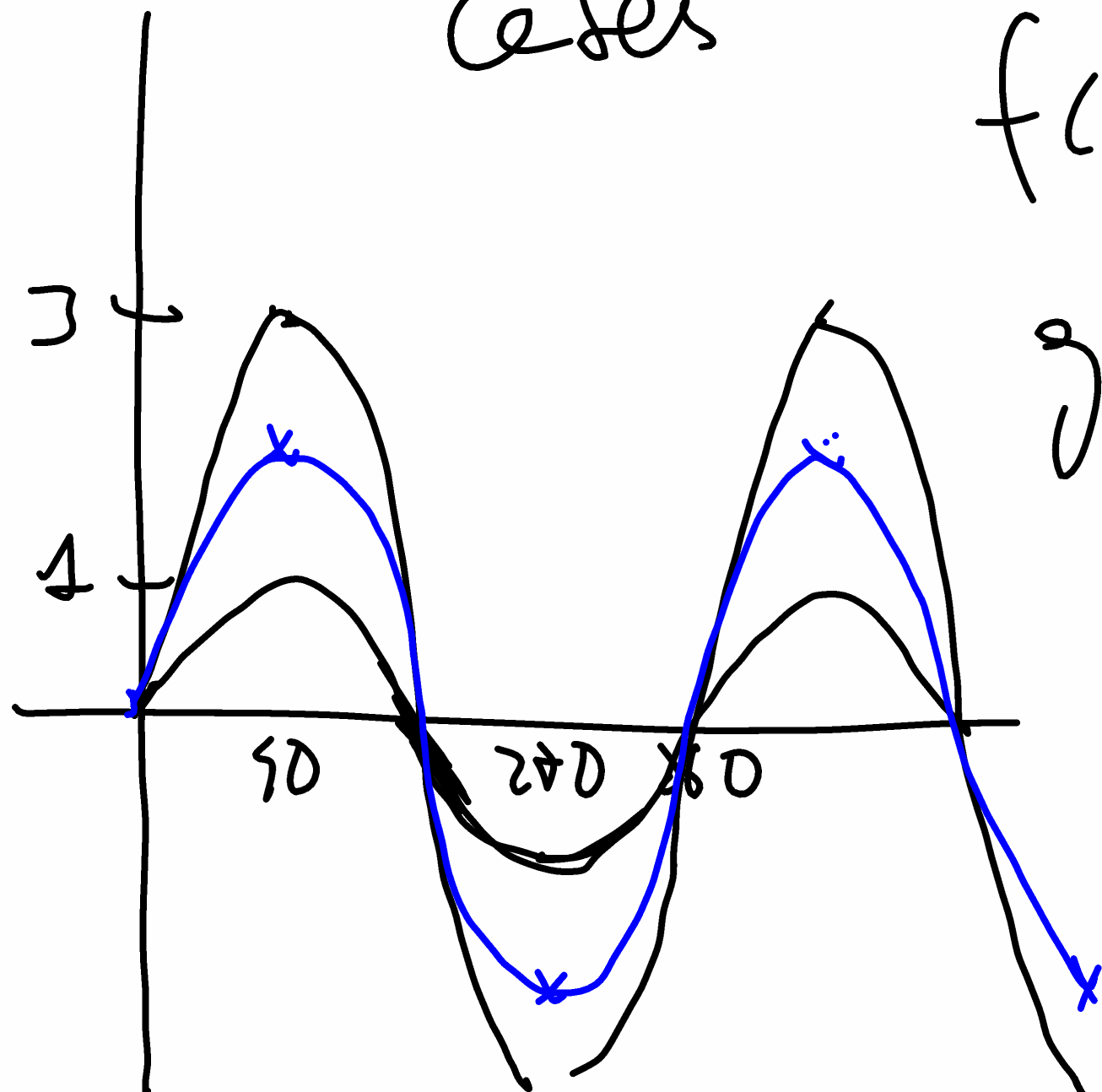
Cases

Example: Run in Geogebra then 2

$$f(x) = \sin(x)$$

$$g(x) = 3f(x) = 3\sin(x)$$

Example 2: Make  $h(x)$  a vertical contraction of  $g(x)$  by a factor of  $2/3$ :  $h(x) = \frac{2}{3}g(x)$

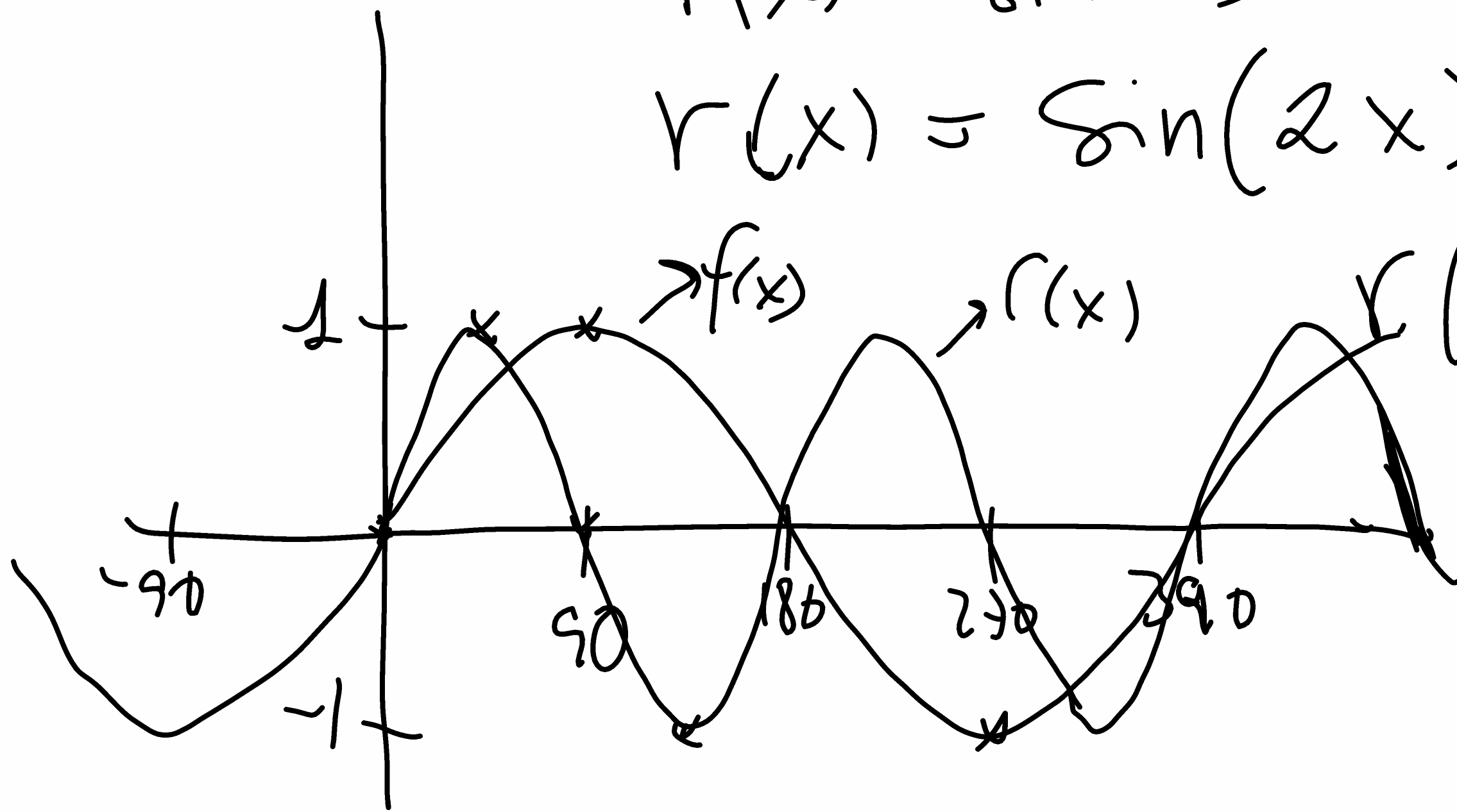


# Horizontal Dilation

Example: In geometry plot these 2 cases.

$$f(x) = \sin(x)$$

$$r(x) = \sin(2x)$$



$$r(90) = \sin(2 \cdot 90) = \sin(180)$$

$$r(45) = \sin(2 \cdot 45) = \sin(90) = 1$$

# Vertical translation

Example: Plot in Geogebra

$$f(x) = \sin(x)$$

$$t(x) = f(x) + 1$$

