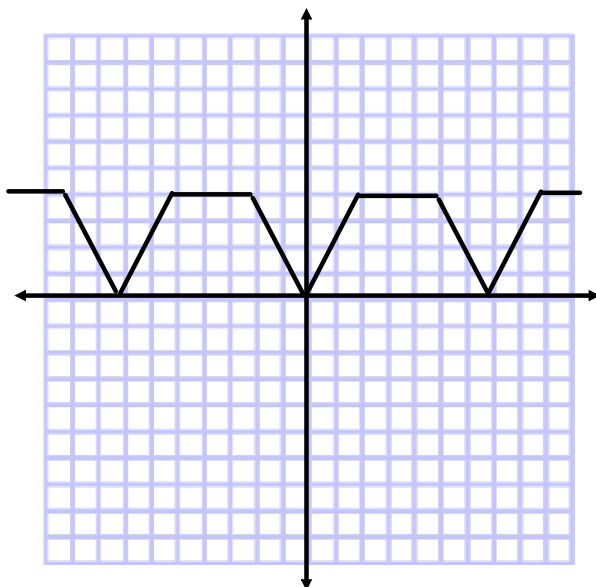


# Periodic Functions

Look for a repeating pattern

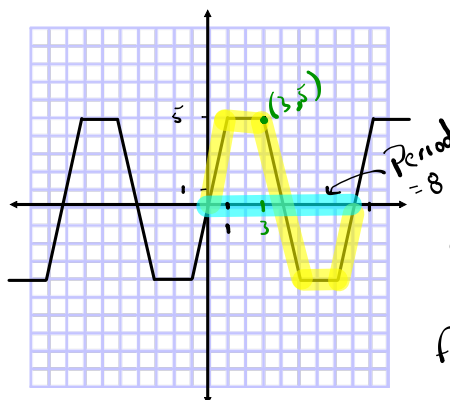


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You need to know how to:

- "read" the function and predict values
- find the **period** (ie the width of **ONE repeating pattern.**)

Ex. What is the period of the function  $f(x)$  below?



$$\begin{aligned} f(-21) &= f(-21+8) \\ &= f(-13+8) \\ &= f(-5+8) = f(3) = 5 \end{aligned}$$

$$\begin{aligned} \text{Find: } f(1) &= 5 \\ f(9) &= f(9-8) = f(1) \\ &= 5 \\ f(25) &= f(25-8-8-8) = f(1) = 5 \\ f(200) &= f(200-8(25)) \\ &= f(0) = 0 \\ f(67) &= f(67-8(8)) \\ &= f(67-64) = f(3) \\ &= 5 \end{aligned}$$

May 10-11:52 AM