

Are there any Homework Questions you would like to see on the board?p. 379 # 6 – 8, 10^{ace}, 11^{ace}, 12

(Note: for 11c, the sketch is incorrect in the text solution)

Today's Learning Goal(s):

By the end of the class, I will be:

- a) ready for the unit summative on sinusoidal functions.

Return and correct SWYK 6.2?

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10. State the amplitude, period, equation of the axis, and maximum and minimum values of $f(x)$ for each sinusoidal function. Verify your answers using graphing technology.

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

amplitude 3

period 360° equation of the axis: $y=0$

Max. value 3

min value -3

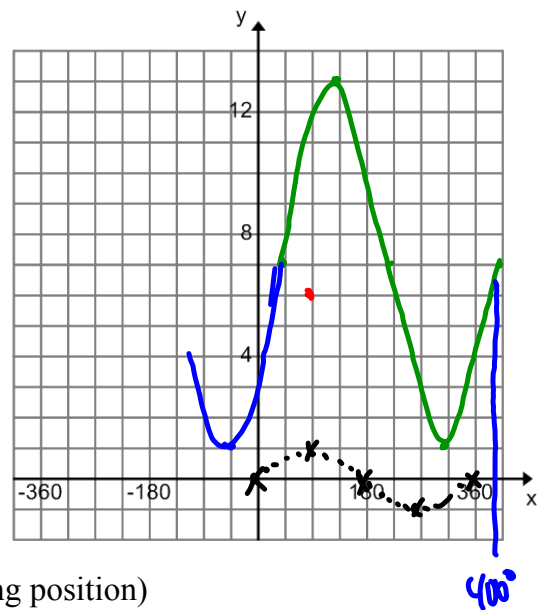
MCF 3MI

6.R Sinusoidal Functions Review

Date: May 9/18*Complete from yesterday's examples:*

12. The height of a Ferris wheel is modeled by the function,
 $h(\theta) = 6\sin(\theta - 45^\circ) + 7$, where $h(\theta)$ is in metres and θ is the number of degrees the wheel has rotated from the boarding position of the rider.

a) Sketch the graph of this function.



b) What is the range of the function?

$$\{y \in \mathbb{R} \mid 1 \leq y \leq 13\}$$

c) What is the amplitude of the function, and what does it represent in this situation?

$$\text{amplitude} = 6$$

represents the radius of the wheel

d) When the rider has rotated 400° (from the boarding position) how high above the ground is the rider?

6.7 m above the ground.
 (estimated from the graph.)

$$\begin{aligned} \text{find } h(400^\circ) &= 6\sin(400 - 45^\circ) + 7 \\ &\approx 6.47 \text{ m} \end{aligned}$$

Today's Homework: p. 378 #1, 2, 10bd, 11bd
 p. 380 #2 (note period = 30°), 3 – 6