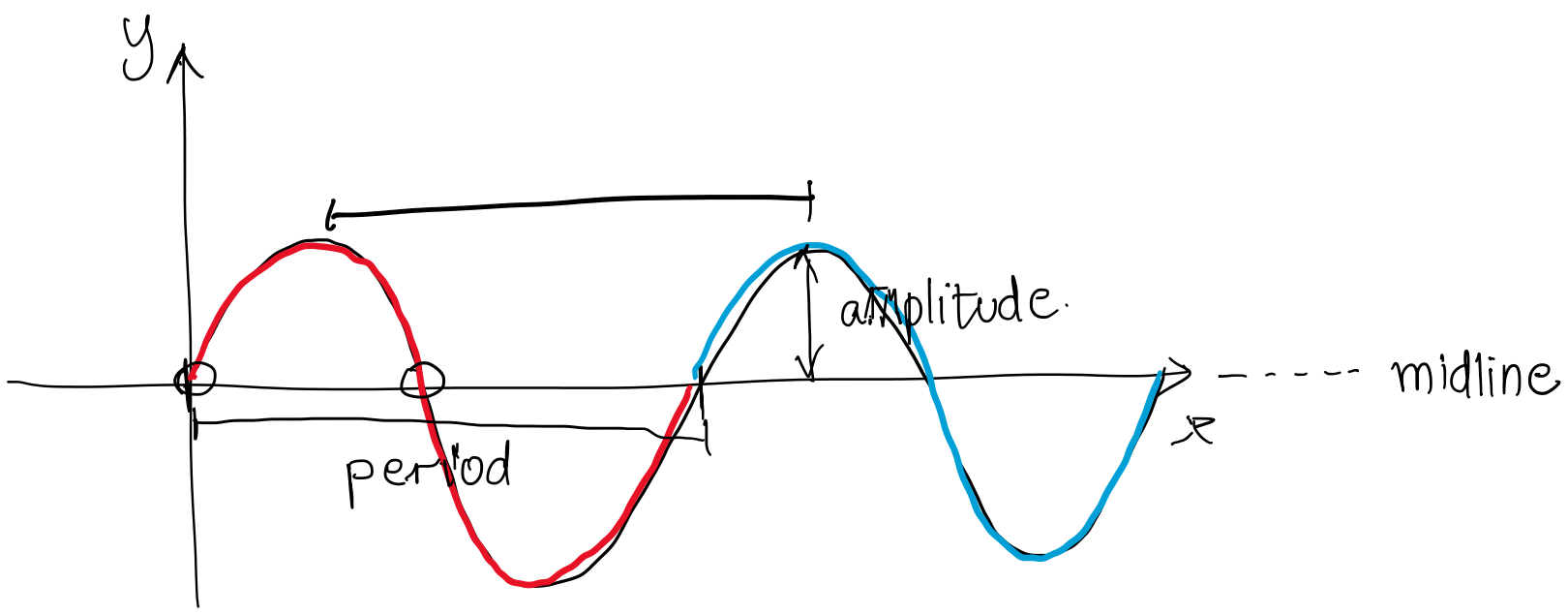
# Intro to periodic functions (sec 7.1)

Thursday, November 12, 2020 4:50 PM

Periodic functions (period, amplitude, midline)




The period is the horizontal gap between consecutive peaks

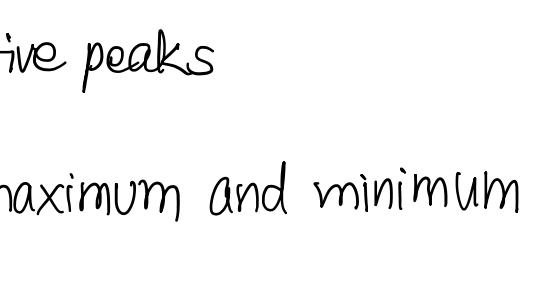
The midline is the horizontal line between the maximum and minimum values

$$\left(y = \frac{\max + \min}{2}\right)$$

The amplitude is the vertical distance from the midline to the peak.

$$\left(\text{amplitude} = \frac{\max - \min}{2}\right)$$

- A function is periodic if its values repeat at regular intervals.




(1 point) **Michigan/precalc/5e/Chap7Sec1/Q29.pg**

The graph describes your height, in meters, after $t$ minutes have elapsed during a ride on a ferris wheel. You boarded the ferris wheel prior to time $t = 0$.

(a) How long does it take the ferris wheel to complete one full rotation?

4 minutes Include units in your answer.

(b) What is the diameter of the ferris wheel?

150 m Include units in your answer.

(c) What is your height at time $t = 0$?

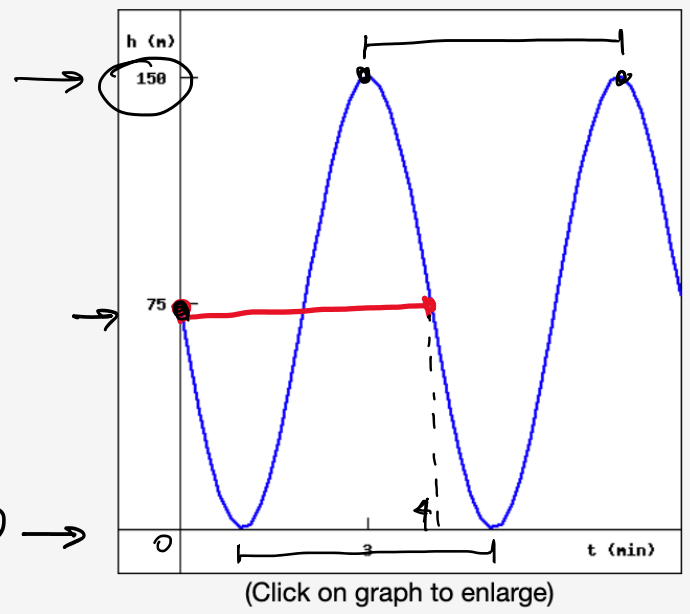
75m Include units in your answer.

(d) What is the height of the loading platform?

0 m Include units in your answer. (loading platform on the ground at 0m)

(e) What length of time does the graph show you riding the wheel?

8 minutes Include units in your answer.




(Click on graph to enlarge)

2 full rotations

period = 4 min