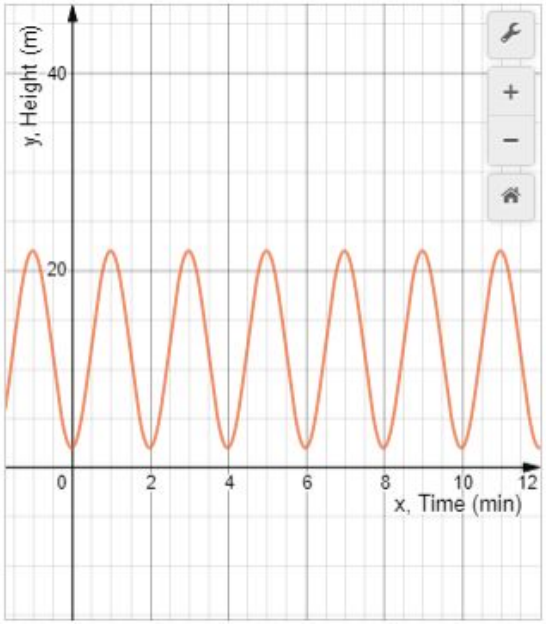
7-4: Graphing Sine and Cosine Functions Great Grapher: Date:

Warm Up: The graph shows a rider's height above the platform when riding a Ferris wheel t minutes after entering the Ferris wheel car.

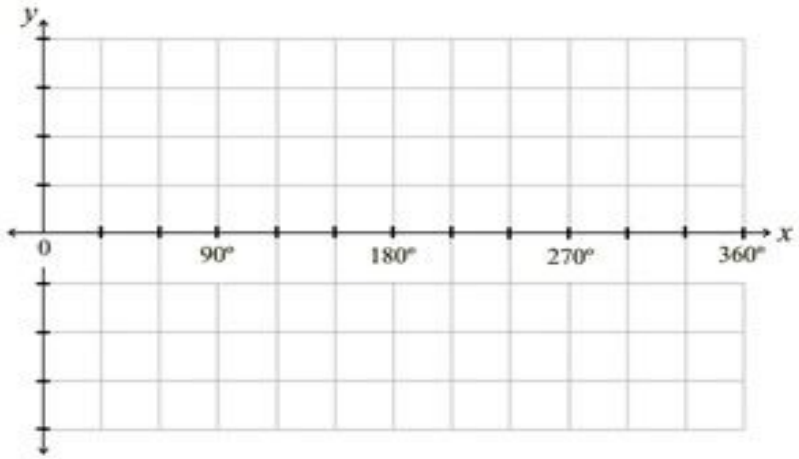


a. Sketch a graph of a rider's height if the Ferris wheel is twice as high. How does the graph represent the change in height?

b. Sketch a graph of a rider's height if the Ferris wheel is the same height as the first, but goes twice as fast. (Hint: How long does it take for the car to reach its max height? How long would it take if it were twice as fast?)

Fill in the table below, then sketch a graph for cos(x) below.

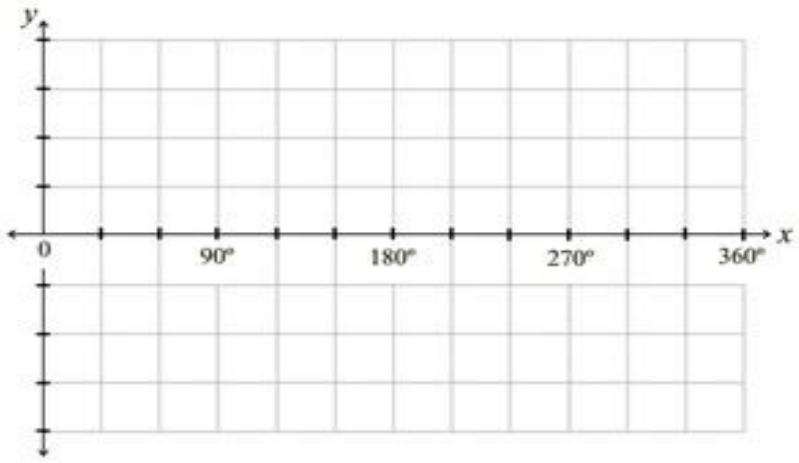
x	0°	30°	45°	60°	90°	120°	135°	150°	180°
cos(x)									
x	210°	225°	240°	270°	300°	315°	330°	360°	
cos(x)									



Write down some observations of this graph here.

Fill in the table below, then sketch a graph for sin(x) below.

x	0°	30°	45°	60°	90°	120°	135°	150°	180°
sin(x)									
x	210°	225°	240°	270°	300°	315°	330°	360°	
sin(x)									



Write down some observations of this graph here.

How do the graphs for sine and cosine compare? How are they different?

Search up the term “periodic function” in the glossary and write down its definition. **In your own words,** why are sine and cosine graphs examples of periodic functions?