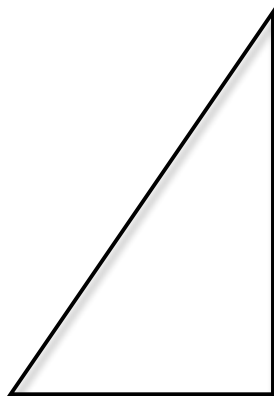


Precalc – Warm Up – 12/1/10

Name: _____

Period: _____

- 1) Find the measure of the missing angles.



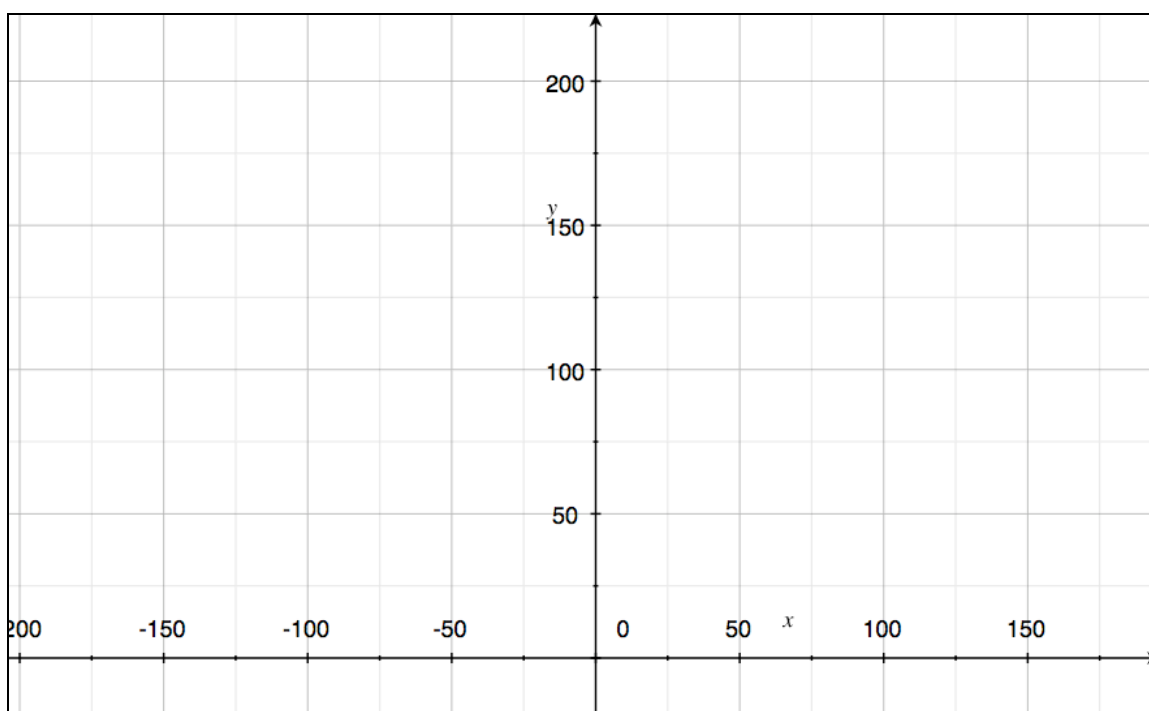
Precalc – Sine in Context – 12/1/10

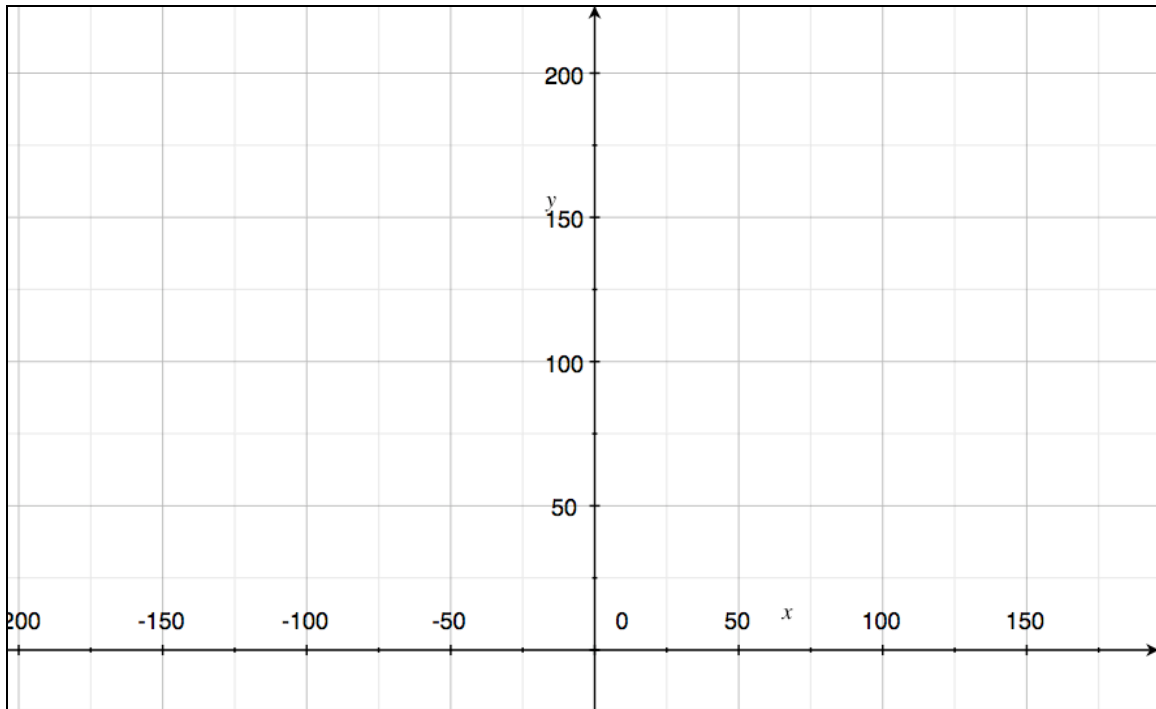
Name: _____

Period: _____

Students will be able to find the height of a Ferris wheel given time.

You and a friend want to ride a Ferris wheel your friend is concerned about how high the wheel will go. You do some research and find out the Ferris wheel has a radius of 100 meters. Imagine that you get on the Ferris wheel at the point $(0, 0)$ and that the wheel turns counterclockwise. Sketch the path that you will take on the graph below.





Now, imagine that it takes the wheel 12 minutes to go one revolution. That is, you are back at your starting point after 12 minutes. Answer the following questions assuming that you get on the Ferris wheel at time 0 and it starts moving in a counterclockwise direction:

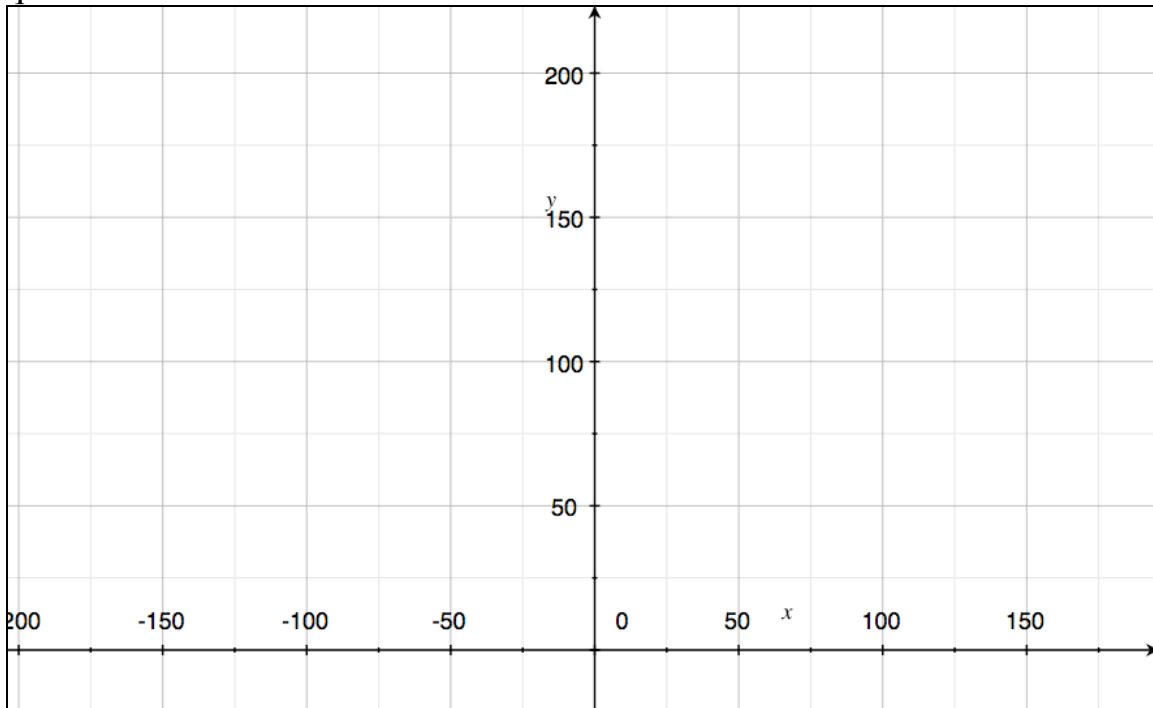
What are your coordinates at time 0?

What are your coordinates at 3 minutes?

What are your coordinates at 6 minutes?

What are your coordinates at 9 minutes?

Your friend is afraid of heights and wants to have some idea of how high she'll be at different times. Use a drawing to help you answer the following questions.



How many degrees do you travel in 12 minutes? How many radians?

If you are on the wheel for 3 minutes, how many degrees did you travel?
How many radians?

How high are you at minute 3?

If you are on the wheel for 1 minute how many degrees did you travel? How many radians?

How high are you at minute 1?

If you are on the wheel for 2 minutes how many degrees did you travel?
How many radians?

How high are you at minute 2?

How high are you at minute 4?

How high are you at minute 5?

At what minute do you reach your highest point?

How high are you at your highest point?

Now, imagine that the Ferris wheel doesn't run continuously but stops and starts to let people on and off. You get on and count that there are 15 cars on the wheel in total. If the 10 cars after you load people on how high are you when the 10th car loads?

Precalc – Exit Slip – 12/1/10

Name: _____ Period: _____

- 1) Use the same Ferris wheel scenario to answer the following question: If you get on the wheel at minute 0 how high are you after 9 minutes?

How high are you after 10 mmintes?