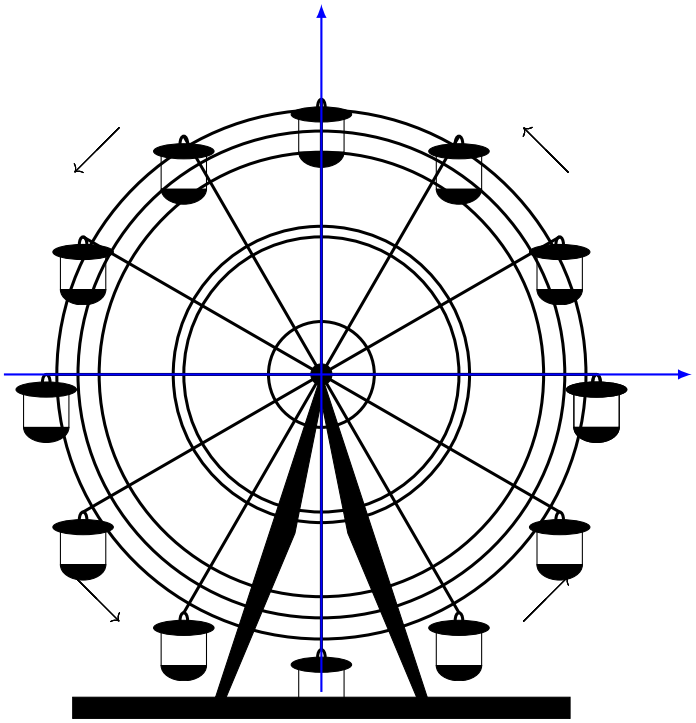

You are about to ride the Ferris wheel in the picture that is 20 meters in diameter and which has 12 passenger cars. You enter the passenger car on the very bottom and try to describe your position in every moment of your trip in the Ferris wheel. As depicted the Ferris wheel rotates counter-clockwise and makes 10 full turns each hour. To describe the position we take the cartesian coordinate system drawn whose origin lies in the center of rotation. Units are meters for length and minutes for time, respectively.

a) Find the exact coordinates $x(2), y(2)$ after 2 minutes of riding the ferris wheel.

b) Draw the graphs of $x(t)$ and $y(t)$ in the time interval from 0 to 6 minutes in the coordinate systems on the right.