Angular Quantities

1. A wheel rotates 3 times. What is its angular displacement?

2. If a 30 cm radius wheel rotates through 3 radians how far has it rolled?

3. What is the angular displacement of the minute hand on a clock during a 30 minute interval.

4. Three hours pass by. What is the angular displacement of the Hour hand on the clock during this interval?

5.   A carnival ride rotates through 4 radians of angular displacement. If the ride has a diameter of 4 meters, what is the path length that the passengers have moved in this time?

6.   A merry-go-round rotates 10 complete revolutions. What path length has the passenger moved through if they are seated 2 meters from the ride's center?

7. Through how many radians has a 40 cm radius wheel rotated through if it has traveled 10 meters?