

Centripetal Acceleration and Tangential Velocity WS.

1. Find the speed of the teeth of a 15 cm diameter sawblade that rotates at 1200 rpm
2. A passenger on an amusement park ride is 3 meters from the center of the ride. If the ride makes 60 revolutions every minute, what is the speed the passenger at the outside edge of the ride.
3. What is the centripetal acceleration of passenger?
4. Find the tangential velocity of a ball twirled on a 1.3 m long string if it makes 5 revolutions every 2 seconds.
5. Find the velocity of the moon in mph if it makes one revolution every 28 days and has an orbital radius around the earth equal to 250,000 miles.
6. Find the centripetal acceleration of a car that rounds an 80 m radius curve at 10 m/s.