



Science Virtual Learning

MPI Physics

Rotational Kinematics 3: Angular Acceleration

April 9, 2020



Lesson: MPI Rotational Kinematics 3: Angular Acceleration
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Objective: To understand the concept of angular acceleration, and how to calculate it

- This video discusses the concept of Angular Acceleration, and how it is used

<https://youtu.be/LNnzJ0-i97Y>

Video: Angular Acceleration



- This video shows two worked examples related to angular acceleration.

<https://youtu.be/FTyw06XbgBc>

Video: Angular Acceleration Examples



1. A top spins 7.00 times per second. What is its angular velocity?
2. A record player spins at 33.3 rotations/minute. What is the period T of its rotation? What is its angular velocity?

Examples from the Video



Homework

1. A car tire is rotating $+24.5$ rotations per second when the driver hits the brake, and slows it to $+11.6$ rot/sec in 3.22 s. What was the angular acceleration? What does the sign of the answer (+ or -) indicate?
2. A potter's wheel is spinning at -3.22 rad/s when a motor accelerates it at -0.0555 rad/s². What is the angular velocity 4.27 s later? What does the sign (+ or -) of the answer indicate?

- Try to solve the problems yourself, then watch the solution video here:
- <https://youtu.be/Tu7Xshwf4xU>
- That's it!