



# Automation & Robotics Virtual Learning

# 7th & 8th Gear Ratios Day 2

April 22nd, 2020

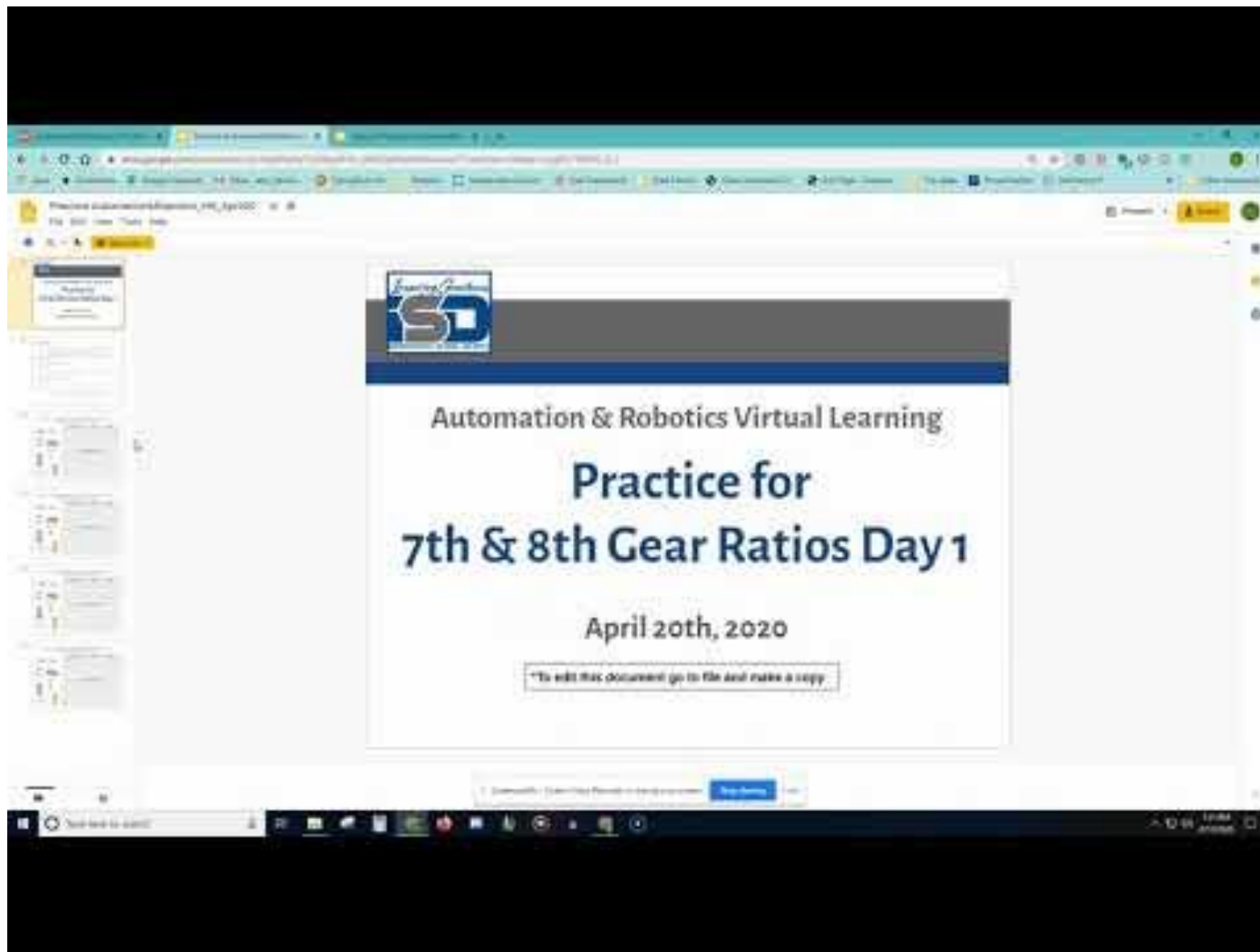


PLTW: Automation & Robotics  
Lesson: Gear Ratios Day 2 [April 22nd]

**Objective/Learning Target:**

Students will review their knowledge of gear ratios and demonstrate their understanding of how gear ratios affect speed and torque in a mechanism.

# Instructions (same as Day 1)



Link to [video](#)

\*To complete the Warm-up, practice, and questions electronically, click [here](#)

# Warm-up

Today we will be using our knowledge of gear ratios to determine what is happening to speed and torque in a given mechanism.

In our second lesson, Mechanisms Day 2 (April 7th) we learned four facts about speed and torque.

**Can you recall a different fact about Speed then the one you picked yesterday?**

Your answer:

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**Can you recall different fact about Torque then the one you picked yesterday?**

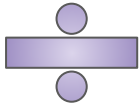
Your answer:

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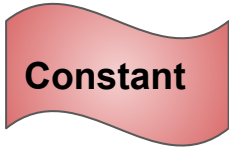
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(If you need help here is the link to [Mechanisms Day 2](#))

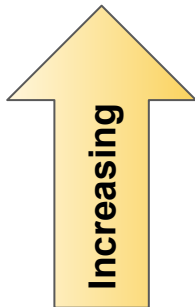
1.) What is the simplified gear ratio for 55:100 and what is happening to Speed and Torque?



Text  
box



Solution  
box

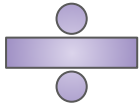


Input	Output

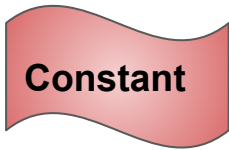
Speed	Torque

Show your work here:

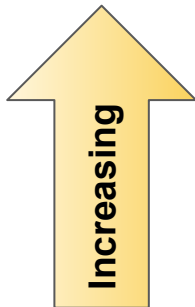
2.) What is the simplified gear ratio for 88:48 and what is happening to Speed and Torque?



Text  
box



Solution  
box

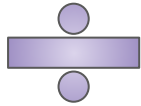


Input	Output

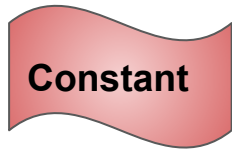
Speed	Torque

Show your work here:

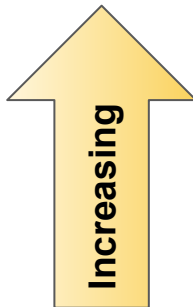
3.) What is the simplified gear ratio for 50:50 and what is happening to Speed and Torque?



Text  
box



Solution  
box

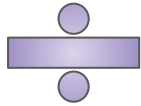


Input	Output

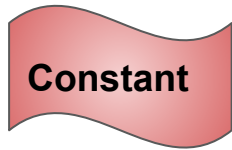
Speed	Torque

Show your work here:

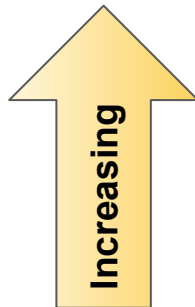
4.) What is the simplified gear ratio for 42:48 and what is happening to Speed and Torque?



Text  
box



Solution  
box



Input	Output	Speed	Torque

Show your work here:



## Extend Your Learning

To learn more about calculating compound Gear ratios check this [video](#) out!