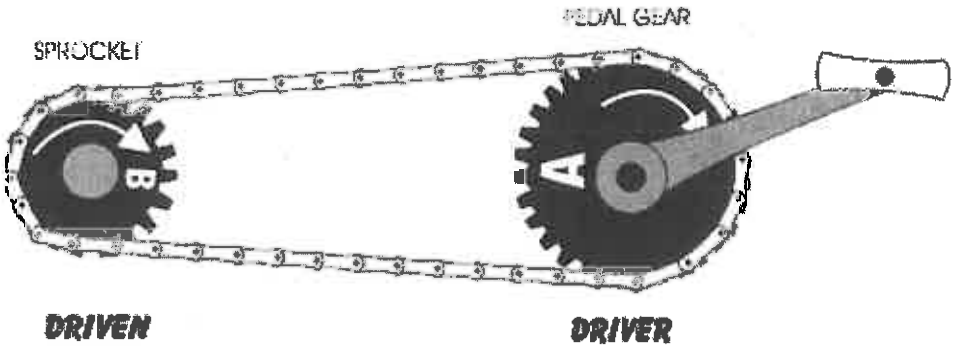
Chain and Gear & Speed Changes



Situation 1 "Slowing down"

A cyclist approaching a sharp turn needs to slow her speed. She is initially traveling at 40 km/h with a driver gear radius of 20 cm and a driven gear radius of 20 cm.

- If the cyclist changes to a driver gear with a radius of 8 cm but keeps the driven gear at 20 cm, what will her new gear ratio be?
- What will her new speed be?

New Gear Ratio:	New Speed:

Situation 2 "Speeding Up"

A cyclist on a straightaway wants to speed up. He is initially traveling at 30 km/h with a driver gear radius of 16 cm and a driven gear radius of 16 cm.

- If the cyclist changes to a driven gear with a radius of 12 cm but keeps the driver gear at 16 cm, what will her new gear ratio be?
- What will her new speed be?

New Gear Ratio:	New Speed: