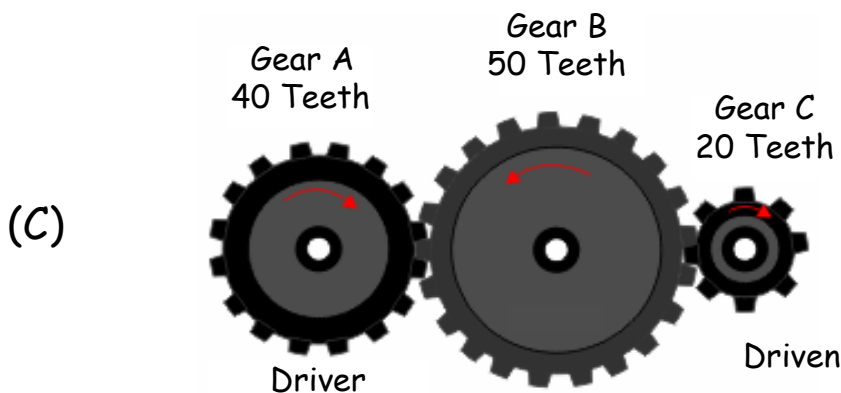
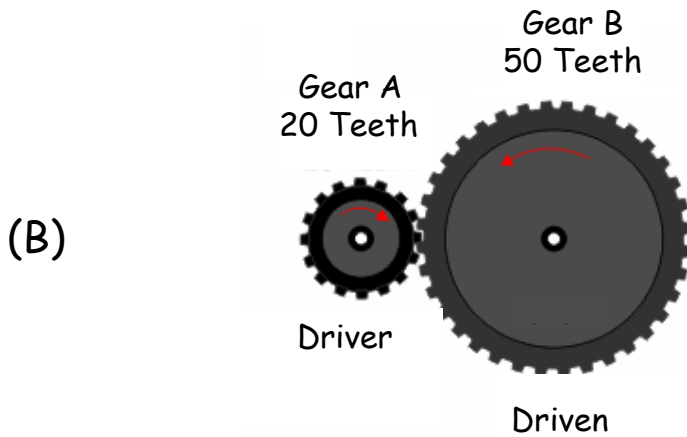
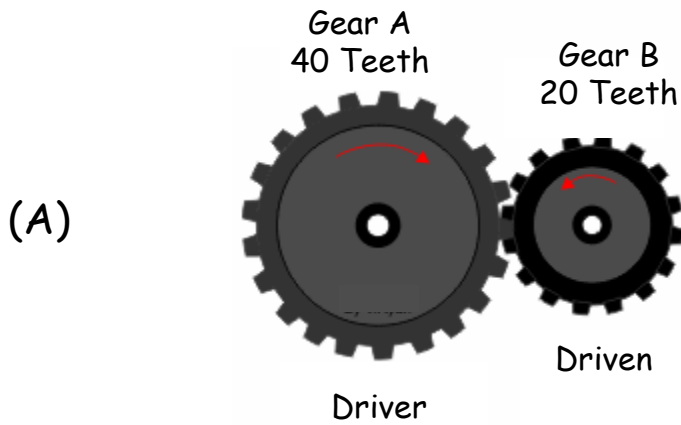
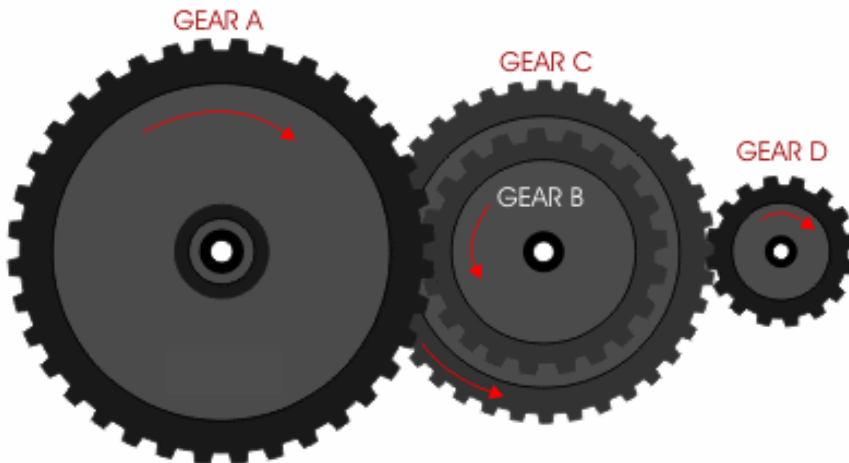


Problem 1. What is the gear ratio of the gear sets shown below? If the driver gear turns at 1500 rpm, what is the speed of the driven gear?



Problem 2. What is the gear ratio of the gear sets shown below? If Gear A is the driver gear and turns at turns at 1500 rpm, what is the speed of the driven Gear D? If Gear D is the driver gear and turns at turns at 1500 rpm, what is the speed of the driven Gear A? Why would you want to design a gear train that reduces the speed of the driven gear?



Gear A = 50 teeth
Gear B = 30 teeth
Gear C = 40 teeth
Gear D = 20 teeth

More Problems

What gear ratio is needed if the input shaft has an angular velocity of 5 rad/s and the output shaft must rotate at 573 rev/min .

What happens to torque when the gear ratio changes?. What happens to the angular velocity?

Given the gears in your set and assuming you can connect a 1500 rpm motor to any one of the gears, how would you arrange any four gears to achieve the slowest rpm for the last gear in the gear train? What would be the speed and direction (clockwise/counterclockwise) of the last gear?