Experiment #2 Gear Reduction

INFORMATION

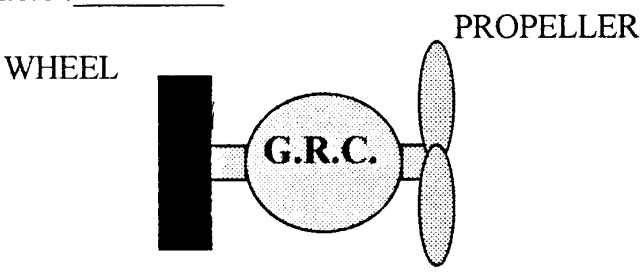
In this experiment you will look at the Gear Reduction Capsule and how it changes the force of the motor. Engineers and designers use different size gears (number of teeth) to allow them to change the speed and twisting force of their motor or engine.

PROCEDURE

Record your findings in the space provided and answer the questions to the best of your ability. You must use complete sentences and spelling does count.

Step 1:

Locate the gear reduction capsule. Place the green propeller on the gray shaft connector and the large wheel on the white shaft connector. Rotate the propeller and count the number of turns it takes to rotate the wheel one time. Place your answer here :_____

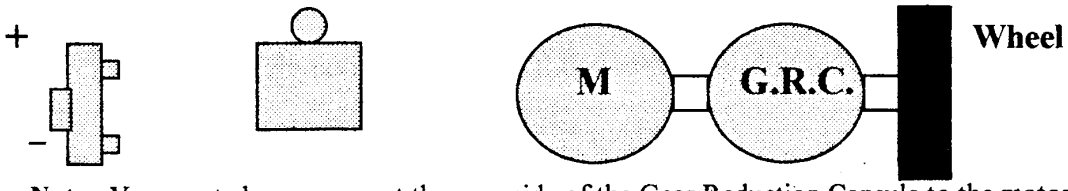


Using your information, how many times does the motor have to turn to make the wheel turn 9 times? (Show your math calculations below.)

Answer:_____

Step 2:

Connect the Capsela components and the electrical circuit as shown below.



Note : You must always connect the gray side of the Gear Reduction Capsule to the motor or the motor will not be able to twist the shaft.