1) A gear ratio (example: 4:1) is defined as the ratio of the speed of the output over the speed of the input.

2) If a gear ratio is 4:1, how many times greater is the torque of the output than the torque of the input?

3) For the same problem, how much slower does the output turn, vs the input?

4) A gear ratio problem is shown with 40 t and 10 t:
   
   A) What is the gear ratio?
   B) How much torque does the output carry?
   C) How fast does the output rotate?

5) Another gear ratio problem is shown with 40 t and 70 t:
   
   A) What is the gear ratio?
   B) What is the output speed?
   C) What is the output torque?

6) A gear ratio problem is shown with 100 t and 100 rpm:
   
   A) What is the gear ratio?
   B) What is the output speed?
   C) What is the output torque?

7) Show that the following gear ratio is 2:1:
   
   20 30 15 80 40
   Input Output
   
   A) What is the gear ratio?
   B) What is the output speed?
   C) What is the output torque?

8) What is the following gear ratio?
   
   20 60 22 70 18 60
   Input Output
   
   A) What is the gear ratio?
   B) What is the output speed?
   C) What is the output torque?

9) If the output and input were swapped, what would be the new ratio?