# QUIZ / How Much Can a Robot Lift?

NAME DATE CLASS PERIOD

*Put a check in the o next to the correct answer.*

1. **What is the rotary force produced on the output shaft of a motor called?**

   o **Power** o Torque o **Gearing**

2. **What is the product of a motor's speed and torque?**

   o Power o **Stall point** o **Work**

3. **What is the condition where a motor encounters so much resistance it cannot turn ?**

   o **Stall power** o Stall torque o **Torque stop**

4. **As a motor's resistance is increased, the required current must:**

   o **Stay the same** o **Decrease** o Increase

5. **As a motor's resistance is increased, the torque must:**

   o **Stay the same** o **Decrease** o Increase

6. **As a motor's resistance is increased, the RPM must:**

   o **Stay the same** o Decrease o **Increase**

7. **If your test shows that you can lift 14 ounces with a 6 inch lever arm, how many inch/ounces of torque do you have?**

   o **20 inch/ounces** o 84 inch/ounces o **8 inch/ounces**

8. **How long is a 6.5 inch lever arm in centimeters? (1 inch = 2.54 cm)**

   o 16.51 o **3.91** o **3.19**

9. **If you needed 12.5 ounces to create stall, how much force did you need in Newtons? (1 ounce = 2.84 Newtons)**

   o **12.784** o **2.84** o 3.55

10. **If your find that your motor stalls when you apply 3.4 ounces of resistance with a lever arm that is 7.25 inches long, what is your torque result expressed in centimeters/Newton's? Show your work on the back of this test.**

    o **24.65 Newton/centimeters**

    o **18.415 Newton/centimeters**

    o 17.788 Newton/centimeters


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