Gear Ratio Activity

Name:_____ 15 Points Period:_____

Complete this activity and turn it in on the due date. Use pieces from the toolboxes to complete this activity. Record the gears that you use in the blanks provided. The gear list in the left blank is assumed to be powered by the motor, and the gear on the right blank is assumed to be the gear being spun, or wheel gear. Please show all work and circle your final answer for each question. While answering the questions, please use full, complete sentences in your response.

1.) ___tooth gear is powering a _____tooth gear; the final gear ratio is _____.

Work for question 1.

Did the wheel gear move faster or slower then the powering gear? Does this mean that the gear ratio is made for torque or speed?

_____
_____
_____

2.) ___tooth gear is powering a _____tooth gear; the final gear ratio is _____.

Work for question 2.

Did the wheel gear move faster or slower then the powering gear? Does this mean that the gear ratio is made for torque or speed?

_____
_____
_____

3.) ___tooth gear is powering a _____tooth gear; the final gear ratio is _____.

Work for question 3.

Did the wheel gear move faster or slower then the powering gear? Does this mean that the gear ratio is made for torque or speed?

_____
_____
_____

4.) ___tooth gear is powering a _____tooth gear; the final gear ratio is _____.

Work for question 4.

Did the wheel gear move faster or slower then the powering gear? Does this mean that the gear ratio is made for torque or speed?

_____
_____
_____

Critical Thinking Questions:

1.) What is the purpose of using gear ratios?

_____
_____
_____
_____
_____

2.) When we say that something has a lot of torque, what does that mean?

_____
_____
_____
_____
_____

3.) If we were to build a dragster, what would a good gear ratio be and why?

_____
_____
_____
_____
_____