Car Wheel Project Portfolio Template

1. How do you find the area of a circle?

2. How do you find the circumference of a circle?

3. What information do you need in order to find the area or circumference of a circle?

4. To determine the number of full rotations your tires complete before you need to switch the front and back tires, will you be working with area or circumference?

5. Measure the circumference of the tires of three different vehicles. Vehicles can include cars, bikes, scooters, tractors, etc. Put in the table below.

6. Determine the number of full rotations the tires of each of the vehicles will complete in 10,000 miles. Put in the table below.

Type/Brand of Tire	Circumference	Calculations	Number of rotations in 10,000 miles
Example	78.5 inches	10,000 miles = 52,800,000 miles = 633,600,000 inches 633,600,000 ÷78.5	8,071,337.6

7. Choose one of the vehicles and keep track of how far you travel in that vehicle for a week (7 days). Calculate the average daily number of rotations made by the tires.

8. Use your data to predict when you will need to switch the front and back tires (10,000 miles). In other words, using the daily average, how many days will it take for your vehicle to make the number of rotations for 10,000 miles you put in the chart above? Be sure to show your work.

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For 2 points extra credit each:

1. What would happen to the number of rotations if the circumference of the tires were increased by 20%?

2. What would happen to the number of rotations if the circumference of the tires were decreased by 20%?