**Skidding Homework**

* **Assume a 2,100 lb car**
* **Assume the initial velocity was 15.5 m/s**
* **Assume a frictional force between the road and tires of 9,364 N**

1. What is the equation used to calculate the distance something will skid?
2. Show the conversion of the car weight from lbs into a mass to be used here.
3. Calculate the distance the car will skid with the initial velocity.
4. Using the equation only and not inserting numbers other than the 2 to show doubling, please show what would happen to the distance something would skid if the velocity were doubled.
5. Calculate the distance something skids when the velocity is doubled using numbers.
6. Using the equation only and not inserting numbers other than the 3, please show what would happen to the distance something would skid if the velocity were tripled.
7. Calculate the distance something skids when the velocity is tripled using numbers.
8. Using the equation only and not inserting numbers other than the 4, please show what would happen to the distance something would skid if the velocity were quadrupled.
9. Calculate the distance something skids when the velocity is quadrupled using numbers.
10. Using the equation only and not inserting numbers other than 7, please show what would happen to the distance something would skid if the velocity were 7 times the original.
11. Calculate the distance something skids when the velocity is 7 times the original using numbers.