

Name \_\_\_\_\_ Date \_\_\_\_\_

Watch the video, then answer the questions below.

<https://tinyurl.com/braking2>

Chart Title: \_\_\_\_\_ 1

Braking Distance (Measurement Unit _____)	2
Gasoline Transport Truck	3
Highway Patrol Car	4
Difference	5

Read each statement. Choose the word from the parenthesis that correctly completes each statement. Write the word on the line to the left.

6. \_\_\_\_\_ In the video, a gasoline transport truck and a highway patrol car were each driven at the same (speed / time) of 60 miles per hour.

7. \_\_\_\_\_ Once each vehicle reached 60 miles per hour the driver pressed the brakes to bring the vehicle to a stop at (10 / 0) miles per hour.

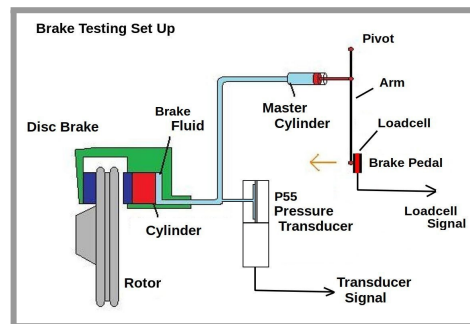
8. \_\_\_\_\_ The reason the researchers thought there would be a difference in the stopping distance between the vehicles is because the gasoline transport truck has greater (mass / height) than the highway patrol car.

9. \_\_\_\_\_ A gasoline transport truck driven at 60 miles per hour has more (speed / energy) than a highway patrol car driven at 60 miles per hour.

10. \_\_\_\_\_ We can conclude that the greater size of the gasoline transport truck caused it to need more (distance / mass) to come to a complete stop.

11. \_\_\_\_\_ The braking distance needed by the truck is due to both its size and its (speed / gravity).

12. \_\_\_\_\_ See the diagram. The rotor is at the center of the wheels. When the driver presses the brake pedal, brake fluid compresses the disc brake against the rotor to stop the car. As the rotor continues to rotate there would be (friction / energy) within the disc brakes.



13. \_\_\_\_\_ See the diagram. As a vehicle comes to a stop, it is likely that the disc brakes will (increase / decrease) in temperature.

14. \_\_\_\_\_ At the end of the video, the words “give trucks space and be safe,” appear. The video showed evidence that even when traveling at the same speed as a car, a truck will need more (distance / energy) to come to a complete stop.

15. \_\_\_\_\_ While the stopping distance of a train was not tested, based on the test of the patrol car and the gasoline transport truck, a train would most likely need (more / less) distance to stop than the gasoline transport truck.