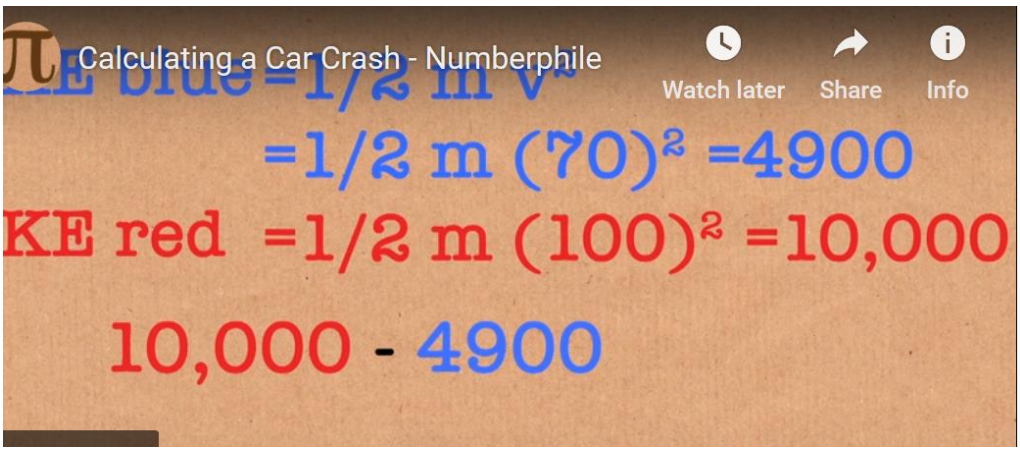
# Stopping Distances:

## Paper and Video:

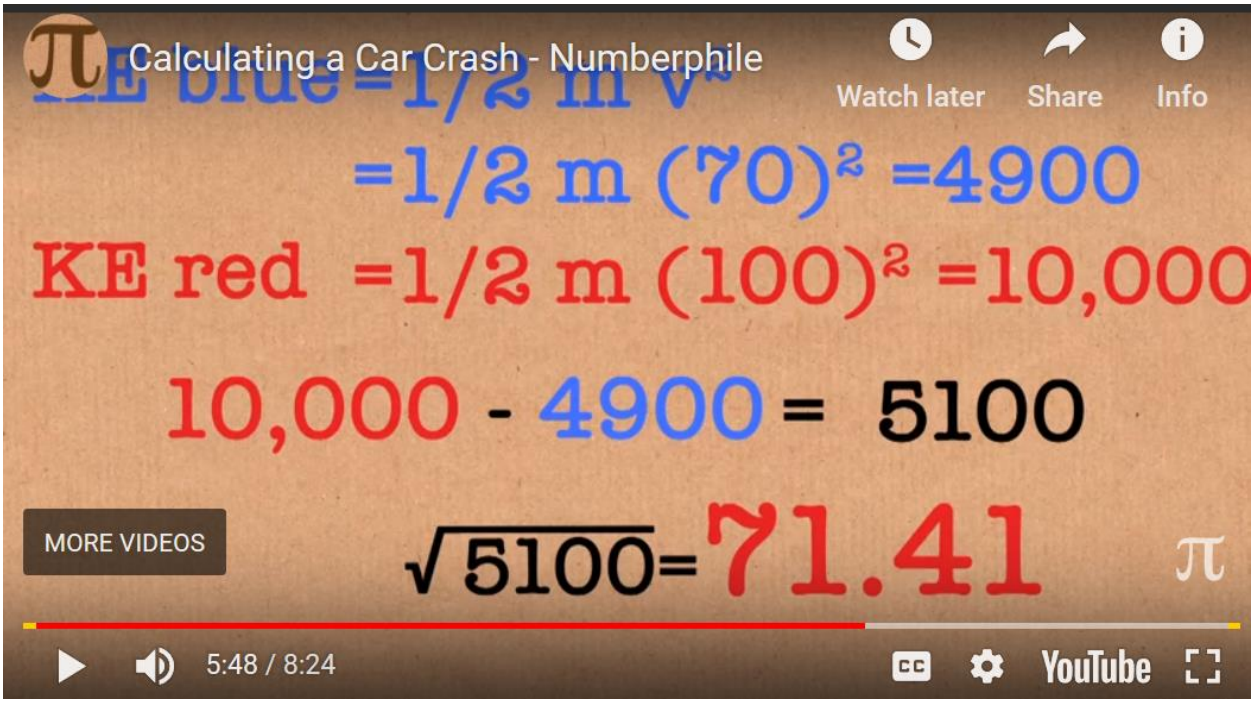
**Two cars Blue at 70 MPH is Passed by Red going 100 MPH – Both slam on brakes. Blue car stops – Red Crashes. How fast is Red car going?**

**https://www.roadandtrack.com/new-cars/car-technology/a15392774/it-takes-nearly-twice-as-long-to-stop-from-80-mph-vs-60-mph-heres-why/**


# Calculate kinetic energy in arbitrary units.



# Result: At crash Red car is going - ??




# Loss in KE indicates 71MPH at crash!!

# Speed, speed limits and stopping distances - Paper

http://www.brake.org.uk/facts-resources/15-facts/1255-speed

Speed and mass are the properties of energy exchanged in a road collision in the form of kinetic energy, the level of energy exchanged has a significant impact on the severity of the crash. It is believed that the exchanged of energy can be calculated equal to half the vehicle's mass times the vehicle speed squared; which means that even smaller increases in speed can lead to an increase in impact severity.

$$\frac{1}{2}\ mv\text{^}2$$