Name _____

CALCULATING KINETIC ENERGY

Directions – Using the data from the motion and mass crash activity, calculate the kinetic energy of the Hot Wheels car during the **20 cm average** measurements of the activity.

Step 1- You will first need to find the velocity of the Hot Wheels car. The following formula is used

Velocity = distance ÷ time

The ramps are **1 meter** long, so use the data table below to help you find the VELOCITY of the Hot Wheels car.

Number of Washers	Distance	÷	Average Time to crash into Jenga Block (from Motion & Mass Crash)	=	VELOCITY	Square the **Velocity** for the next step
0	1 m	÷		=		
1	1 m	÷		=		
2	1 m	÷		=		
3	1 m	÷		=		
4	1 m	÷		=		
5	1 m	÷		=		
6	1 m	÷		=		
7	1 m	÷		=		

Step 2- You will calculate the kinetic energy of the Hot Wheels car. Use the following formula to calculate Kinetic Energy **KE = (mass x velocity^2) x 0.5**

Use the data table below to help you calculate the kinetic energy

Number of Washers	Mass (g) (from Motion & Mass Crash)	x	*Velocity^2 **x**	****0.5**	=	Kinetic Energy
0		x		0.5	=	
1		x		0.5	=	
2		x		0.5	=	
3		x		0.5	=	
4		x		0.5	=	
5		x		0.5	=	
6		x		0.5	=	
7		x		0.5	=	

*hint - make sure you use the squared velocity number from part 1

** hint – When using a calculator, it is easier when you use the following pattern--
Mass x velocity^2 = **then** x 0.5 = Kinetic Energy