

Catastrophic Cat Catapults

Name: _____

Mr. H has been talking about speed and average speed for a while now :). Now it's your turn to show me what you know. Mr. H will pick your groups of 2-3 and you will obtain a cat catapult, meterstick, and stopwatch. Speed is distance over time. The meterstick will determine distance...and the stopwatch will determine time. Here's what you're going to do.

Duties:

Person 1: Man's the Catapult, adjusts the settings, records time on stopwatch, and records the data.

Person 2: Notes where the cat landed, marks location, measures distance from fallen cat to catapult.

Person 3 (optional): Verifies location, records data.

Round 1:

Step 1:

Person 1: Adjusts green dial on side of catapult to 1 **and** adjusts orange dial to 1. Obtains stopwatch from Mr. H.

Person 2: Grabs meterstick and locates themselves close to where the cat will land.

Step 2:

Person 1: Confirms person 2 is ready, locks cat in, and fires. Start stopwatch **the instant** you fire and stop **the instant** the cat hits the floor.

Person 2: Measures distance from catapult to where cat **first** landed with meterstick.

Person 2: Reports measurement to person 1

Person 1: Records measurement and time below...

Attempt #	Time (Seconds)	Distance (meters)	Speed=(D/T)
1			
2			
3			
Average			

Step 3:

Both: Repeat Step 2 three times

Round 2:

Person 1: Adjusts orange dial to 3.

Both: Repeat **step 2** record information below

Attempt #	Time (Seconds)	Distance (meters)	Speed=(D/T)
1			
2			
3			
Average			

Round 3:

Person 1: Adjusts orange dial to 5.

Both: Repeat **step 2** record information below

Attempt #	Time (Seconds)	Distance (meters)	Speed=(D/T)
1			
2			
3			
Average			

Which round had the speedier cats?

Which round had the slowest cats?

What do you think the purpose of the dial on the catapult is?

Speed Problems (Show work where applicable)

1. Mr.H is traveling to his family. They live 800 miles away. Mr. H gets there in 10 hours. What is his average speed?

2. Riley is fleeing the science classroom. He manages to run 50km in two hours. Then he rests and runs another 10km in an hour. At this point he is pretty tired. What is Riley's average speed?

3. Evie is chasing down Daisy in a game of tag. Daisy runs 400km in four hours. Evie runs 350km in three and a half hours.

What is Daisy's average speed?

What is Evie's average speed?

After four hours how far would Daisy have run at this speed?

After four hours how far would Evie have run at this speed?

After four hours how far would they have both run in total?