

Materials Needed:

- Pencil or Pen
- Paper or Notebook
- Calculator (optional, but helpful for complex calculations)
- Access to the internet (for potential research or data lookup - optional)

Paranormal Phenomena: An Arithmetic Investigation!

Welcome, Investigator! Today, we're not just doing math; we're venturing into the unknown world of paranormal activity. Strange occurrences, mysterious sightings, and unexplained events often come with data – numbers, frequencies, and patterns. Our mission is to use our arithmetic skills to analyze some fictional paranormal case files. Are you ready to uncover the mathematical secrets behind the spooky?

Case File #1: The Spooky Specter Sightings

The old Blackwood Manor reported ghost sightings over the last few years. Let's analyze the data:

- Year 1: 15 sightings
- Year 2: 21 sightings
- Year 3: 18 sightings

Tasks:

1. What was the total number of sightings over the 3 years?
2. What was the average number of sightings per year? (Calculate the mean)
3. What was the percentage increase in sightings from Year 1 to Year 2? (Formula: $[(\text{New Value} - \text{Old Value}) / \text{Old Value}] * 100$)
4. What was the percentage decrease in sightings from Year 2 to Year 3?

Case File #2: Electronic Voice Phenomena (EVP) Analysis

During a 5-hour investigation at Grey Hollow Asylum, a team recorded several EVPs (mysterious voices not heard at the time). The durations (in seconds) were: 3s, 5s, 2s, 1s, 5s, 4s.

Tasks:

1. How many EVPs were recorded in total?
2. What was the total duration of all recorded EVPs?
3. What was the average duration of an EVP?

Case File #3: The Orb Probability Problem

A paranormal investigator claims their special camera has a 1 in 8 chance (1/8 probability) of capturing a 'spirit orb' in any given photo taken in a known haunted location.

Tasks:

1. If the investigator takes 40 photos, theoretically, how many photos would you expect to contain an orb?
2. Express the probability ($1/8$) as a decimal and a percentage.
3. Is it *guaranteed* they will get exactly that many orbs in 40 photos? Why or why not? (Think about probability vs. certainty).

Case File #4: Temperature Fluctuation Graph

Investigators often report sudden temperature drops during paranormal events. Look at this simple (imaginary) data table showing temperature readings during a one-hour vigil:

Time (Minute)	Temperature (°F)	Notes
0	70	Vigil starts
15	69	
30	62	Reported cold spot, strange noise
45	68	Temperature rising
60	69	Vigil ends

Tasks:

1. What was the lowest temperature recorded?
2. What was the total temperature drop between minute 15 and minute 30?
3. Between which time points did the temperature increase?

Conclusion: Math in the Mystery

See? Even in the spooky world of the paranormal, arithmetic is a crucial tool! Calculating averages, percentages, and understanding probability helps investigators (and us!) make sense of the data they collect. Whether it's ghost sightings or EVPs, numbers help tell the story. Good work today, Investigator!