**Blood Drop Analysis Lab 4- Calculating Area of Origin**

The purpose of this exercise is to use the equations we have learned to determine the area where the spatter originated in space.

**Materials:**

1. Calipers
2. Meter stick
3. Pencil
4. Journal
5. Calculator

**Lab Sequence:**

1. Use your observation and deductive reasoning to determine direction of travel.
2. Using the calipers measure the length and width of at least 3 drops in each spatter pattern. There are multiple patterns on each sheet of paper, you will need to measurements and calculations for each one.
3. Plug your measurements into the following equation to determine Angle of Origin:

**AOI = SIN-1 (W/L)**

1. **WITHOUT** drawing lines on the sheet, determine the Area of Convergence for each of the drops measured. Then measure the distance from the blood drop to the AOC.
2. Calculate Area of Origin by inputting the AOI and distance you just measured into the following equation to find the Area of Origin:

**Area of Origin = TAN (AOI) x Y**

1. In order to be as accurate as possible and to ensure you are finding the Area of Origin for each spatter pattern, these calculations need to be done for each one.

**Results:**

Compile your results in a graph similar to previous labs.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sheet # | W&L | AOI | DISTANCE | AREA OF  ORIGIN |
| Spatter 1 |  |  |  |  |
| Spatter 2 |  |  |  |  |
| Spatter 3 |  |  |  |  |