Activity: Blood Spatter Analysis

Objective: Your goal is to determine based on the blood evidence left behind at a crime scene, how high off the ground is the injury sustained by a suspect that fled the scene.

Part A
1. Find the ratio of the width to length of each droplet. Round the ratio to two decimal places. Record your answers below.

2. Calculate the angle by finding the arc sin. Record your answers in the data table below. The distance from the point of convergence for each droplet is given to you.

Spatter A

L

Spatter D W

Spatter B
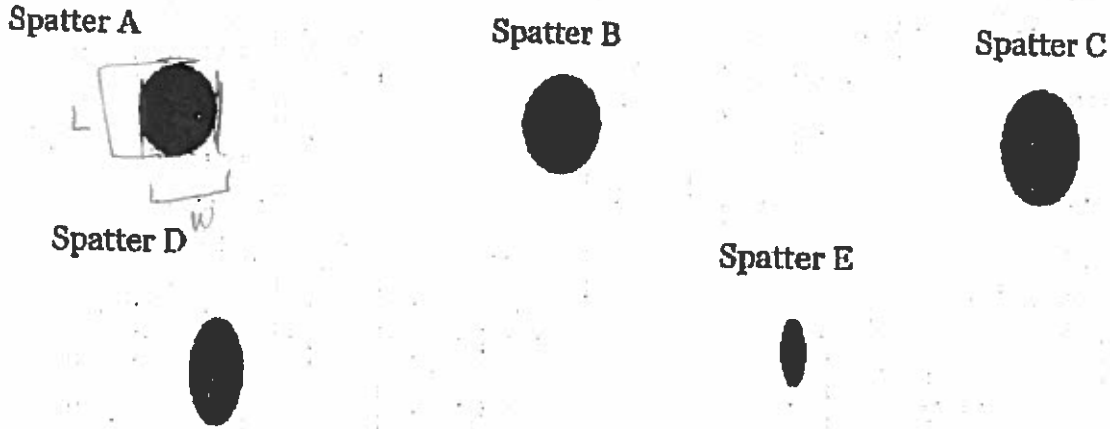
Spatter C

Spatter E

Spatter	Width	Length	Sin (ratio)	Arcsine = $\sin^{-1}(w/L)$	Angle	Distance from p.o.c.
Spatter A	10	12	10/12		56	32 in.
Spatter B	10	13	10/13		50	40 in.
Spatter C	10	15	10/15		42	53.5 in.
Spatter D	7	14	7/14		30	96 in.
Spatter E	3	9	3/9		19	141.5 in.

Part B
3. On graph paper, create a scale to indicate all the distances from the point of convergence column on your data table. Label this axis as the "Distance from point of convergence in inches".

4. Create an identical scale on the y axis and label it, "Distance above floor in inches".

5. Plot the distances from the point of convergence on the x-axis. The x-axis represents the floor. Start with the spatter A as the point closest to the y-axis and above the point label the corresponding angle of impact. Repeat for all spatters.

6. Use a protractor and plot the corresponding angle for each distance from the x-axis. Draw a line that intercepts the y-axis. Repeat for all spatters. The point at which these lines intercept on the y-axis will reveal the approximate height of the injury on the suspect.

Activity: Blood Spatter Analysis
Part II

approx. 47 cm up from ground

52° A
50° B
42° C
30° D
19° E

Distance above ground (cm)
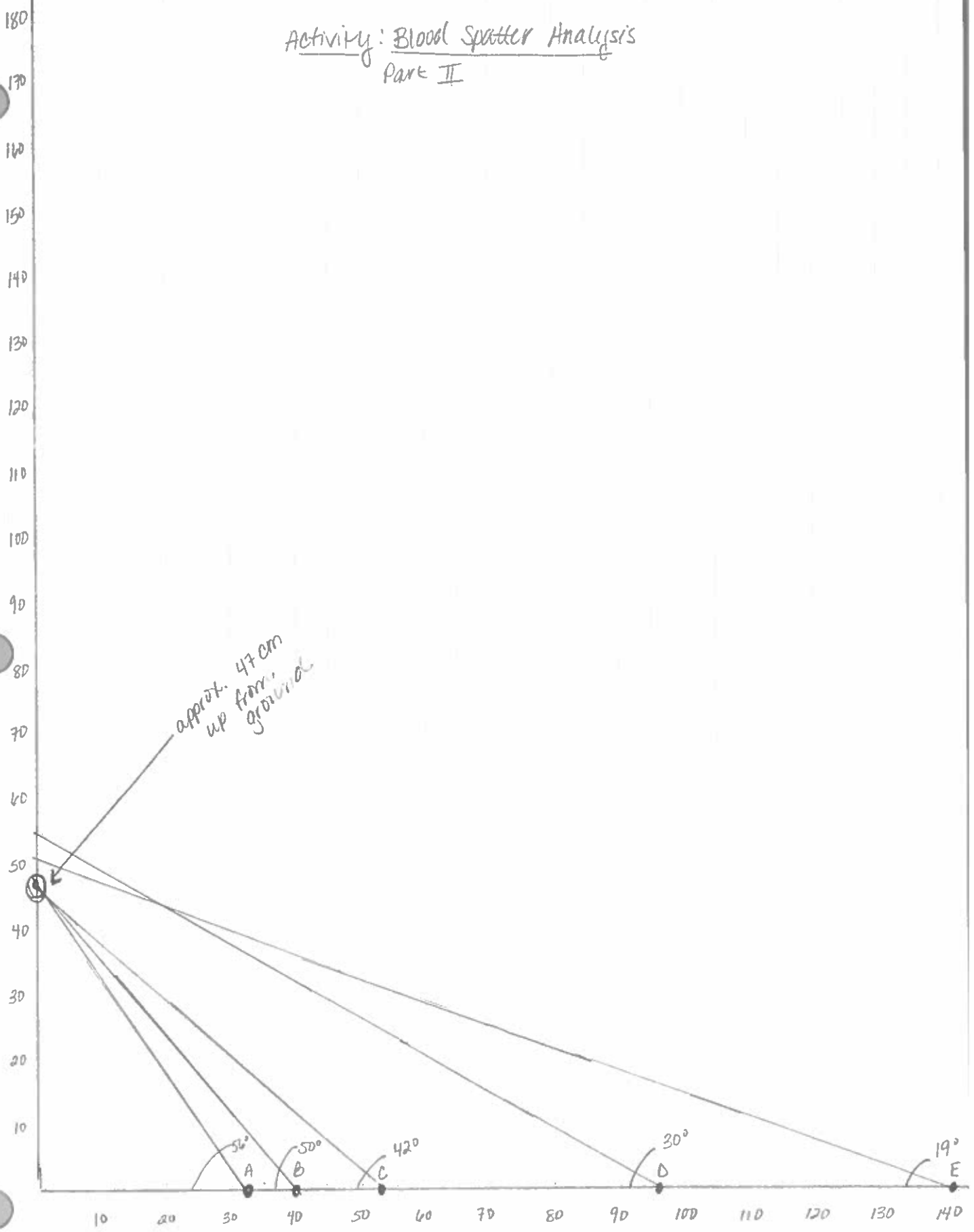
Distance from Area of Convergence (cm)