Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Blood Activity- Impact Angle**

To determine the impact angle, you will need to:

1. Determine the direction in which the blood was traveling
2. Draw lines of convergence
3. Draw a small circle around the intersection of the lines of convergence to indicate the area of convergence
4. Using the blood drops for each problems determine the angel of impact
	1. Measure the width and the height of the blood droplet
	2. Divide the width/length ratio for blood droplets
	3. Using a calculator and the inverse sin function, determine the angel of impact for that blood droplet.

**Problem 1**

****

3

2

1

Calculated Angle of Origin 1 :\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculated Angle of Origin 2 :\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculated Angle of Origin 3 :\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Problem 2:** A 30 year old man was found shot in the head in his garage. The suspect claims he was being attacked by the victim and shot the victim in self-defense. Based on the angle of impact, is the suspect’s statement true?



4

3

1

Calculated Angle of Origin 1:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculated Angle of Origin 2:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculated Angle of Origin 3:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculated Angle of Origin 4:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Do you believe the suspects story? Why?

**Problem 3:** A victim was found at the foot of a ladder with a chest wound. Does the angle indicate this was an accident or a murder?



Calculated Angle of Origin 1:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculated Angle of Origin 2:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculated Angle of Origin 3:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculated Angle of Origin 4:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculated Angle of Origin 5:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Calculated Angle of Origin 6:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Was this an accident or a homicide? Explain your answer.

6

5

4

2

1

**Problem 4**: Describe a sequence of events of what you think happened based on this blood spatter pattern. Be sure to calculate the angle of impact for each droplet and find an area of convergence.



**Problem 5**: Describe a sequence of events of what you think happened based on this blood spatter pattern. Include how many individuals you think are involved. Be sure to calculate the angle of impact for each droplet and find an area of convergence.



**Problem 6**: Describe a sequence of events of what you think happened based on this blood spatter pattern. Include how many individuals you think are involved. Be sure to calculate the angle of impact for each droplet and find an area of convergence.

