

# Essay about introduction to forensic science

[Science](#)



**ASSIGN  
BUSTER**

1. What is the NIBIN? NIBIN is the National Integrated Ballistic Identification Network that was created by the FBI and the ATF in 1999.
2. What is rifling? What two types of markings does this produce? Rifling is when each gun is given spiral grooves by the manufacturer. The spiral grooves are cut into the barrel of a gun in order to make a bullet spin as it is fired. Rifling produces grooves and lands.
3. What is a distance determination? How is this done? A distance determination is the process of estimating the distance between where a shot is fired and its target. This is often done by looking at the patterns of powder residue and the shot pattern.
4. What is the Greiss Test? The Greiss Test uses chemicals to develop gunpowder residue patterns, particularly around bullet holes.
5. When a bullet is retrieved, how is it marked for identification purposes? What should be avoided? Once a bullet has been retrieved, it is usually marked with the investigator's initials, often at the tip or base of the bullet. The sides of the bullet should not be marked. Care has to be taken that this mark does not cover or obscure any striations or markings on the bullet.

#### Critical Thinking Questions

1. If you found a firearm at a crime scene, what steps would you take in order to transport the weapon to the lab? First, I would make a note about the position of the gun's safety and hammer. Then, I would need to unload the gun before it is transported or handled in analysis. Finally, I would take each round from the firearm and place it in a separate envelope.

2. Why do you think it might be useful to know the distance between a gun fired and its target? It would be useful to know the distance because if you know the distance, you might be able to find more clues as to who committed the crime based on where they shot the victim.

3. If you were in charge of retrieving bullets at a crime scene, what steps would you take to retrieve a bullet and take it to the crime lab? If I were in charge of retrieving bullets at a crime scene I would first have to find a way to remove the bullet out while preserving any possible markings on the bullet. Then the bullets can be placed into a marked container for identification purposes. Then to transport the bullet to the crime laboratory, I'd wrap the bullet in tissue paper and placed in an envelope or pillbox. I would have to be careful with the handling and packaging of the bullet, because I would have to be careful to preserve any trace evidence that might be present on the bullet.

4. What are some of the challenges in analyzing tool marks? Some of the challenges in analyzing tool marks is it is difficult to duplicate the mark left by tools through tests in the laboratory and tool marks may not always give individual characteristics.

5. What is the Doppler Effect? How can the Doppler Effect be useful for a forensic investigation involving a shooting? It is important for a forensic scientist to determine the distance from a gun to a shooter because in some cases a defendant accused of murder may say that the shooting happened in self-defense. Figuring out the distance between the two individuals may give an indication of whether the defendant is telling the truth or not. Similarly,

knowing an approximate distance of a shot can help forensic scientists determine if a death was asuicideor a homicide made to look like a suicide.