Blood Spatter Analysis

1) What happens to the size/shape of the blood drop as height is increased?

2) What happens to the size of the blood spatter as velocity increases?

3) What happens to the shape of the blood drop as the AOI decreases?

4) What happens to the shape of the blood drop as the AOI increases?

5) Blood falling at 90° will have what shape?

6) Calculate the AOI when the length is 5mm, and the width is 3.2mm.

7) Calculate the height of origin when the length to the AOC is 135cm for the angle in question #6.

8) What happens as one drop of blood lands on another?

9) What is the difference between blood spatter from a person who is walking vs. running away?

10) A blood stain which is 0.5mm would most likely result from a: Blunt force blow, gun shot, stabbing

11) What characteristics about blood spatters are useful for reconstructing the crime scene?

12) In general _____and_____surfaces, result in less spatter.

13If you find a trail of blood droplets that are round and close together, what could this mean? What are some possible circumstance4s that could cause this?

14) Describe the trail you might find if someone with an injury is running away from the crime scene.

Detecting Blood : Match each test with its use: Precipitin, Kastle-Meyer, Hemastix, Luminol

1. Best used to detect very small trace amounts of blood.
2. Color test which turns deep pink when blood is oxidized.
3. Used to determine the origin of the blood sample, human or animal.
4. Color test which turns green in the presence of blood.
5. List all tests which are screening tests.
6. List all the tests which are confirmation tests.
7. In what order would the above tests be performed.
8. Why are microcrystalline test not as popular as other screening methods?

Describe what each would look like:

Passive bloodstain (give definition + 2 examnples)-

Projected blood stain (give definition + 2 examples)-

Expiratory blood stain-

Transfer or contact stain -

swipe (1 ex)-

wipe(1 ex)-

arterial spurting.-

15) Write the scientific name and explain the role of each type of blood cell:

Red blood cells (a.k.a_____) :

White blood cells (a.k.a_____) :

Which type of blood cell has a nucleus and DNA?

Platelets (a.k.a _____):

Blood Typing

16) Rank the following blood types from the highest population percentage to the least (A, B, O, AB)

17) Fill in the blanks on the following chart:

Blood Type	Type A			
Possible Genotypes				**AB**
Antigens (surface proteins/agglutinogens)			**B**	
Antibodies present		**AB**		

18) People with blood type O are universal_____, while blood type AB is the universal_____.

19) For each of the following patients list **all possible blood types (**including + or – for the rhesus factor) they may receive for a transfusion.

Patient 1: AB+

Patient 2: B+

Patient 3: A-

Patient 4: O+

20) Fill in the following chart based on lab results

	Anti-A	Anti-B	Anti-Rh	Blood type
Patient 1	No agglutination	No agglutination	No agglutination	
Patient 2	Agglutination	No agglutination	agglutination	
Patient 3				B+
Patient 4				AB-