

Fingerprints Test Review

1. Match the contribution to the fingerprint contributor:

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| <u> </u> G <u> </u> Bertillon | a. Father of fingerprinting and wrote <u>Finger Prints</u> . |
| <u> </u> C <u> </u> Fauld | b. Modified fingerprint system for South American Countries. |
| <u> </u> E <u> </u> Henry | c. Offered to fund Scotland Yard's fingerprint bureau. |
| <u> </u> A <u> </u> Galton | d. First person to devise a system for classifying prints based on 9 patterns. |
| <u> </u> B <u> </u> Vucetich | e. Modified fingerprint system for English speaking countries. |
| <u> </u> F <u> </u> Grew | f. Issued a report in 1684 describing the ridges and pores on hands and feet |
| <u> </u> D <u> </u> Purkinje | g. Created Portrait Parle system as a means of identifying criminals. |
| <u> </u> H <u> </u> Chinese | h. Country that first used fingerprinting as a means of identifying. |

2. What measurement system was Alfonse Bertillon responsible for creating to aid in identification of criminals? **Portrait Parle**
3. What "event" led to the wide spread use of fingerprinting in police work? **St. Louis World's Fair**
4. What is portrait parle based on? **the belief that no two humans have the exact same anthropometric body measurements**
5. What theft led to the decline of the use of portrait parle? Give details about the case. **The theft of the Mona Lisa. The janitor who had stole it was actually fingerprinted and his print matched the print left on the frame, but Bertillon only took prints from one hand for his portrait parle (the print on the frame was from the other hand).**
6. What "incidence" at Ft. Leavenworth Prison led to the use of fingerprints for identification? **Two men (both named William West) looked exactly alike and had the same body measurements. The only way to tell them apart was by fingerprinting**
7. What is dactyloscopy? **the classification of fingerprints to use for identification**
8. Describe the skins layers of the finger. **epidermal outer layer of skin with a dermal layer underneath. Papillae separates the epidermal and dermal layer with sweat glands dispersed throughout.**
9. How does the papillae impact fingerprints? **it determines the friction ridge structure of the epidermis that fingerprints are based on**
10. Is it possible to "erase" fingerprints? **no, the fingerprint is imbedded in the papillae and will grow back**
11. Is it possible for two people (even identical twins) to have the same fingerprint? **no**
12. Define delta and core. **delta- point on a ridge where two lines diverge forming a triangular shape; core- central area of the fingerprint**
13. What are the three basic fingerprint classification types? **loop, arch, and whorl**
14. Describe the arch type. **Friction ridges enter from one side of the finger and exit the other while rising upward in the middle.**

15. What percent of the population has an arch fingerprint? **5%**
16. Describe the loop fingerprint. **Has one or more ridges entering from one side, curving, and then going out from the same side it entered.**
17. What percent of the population has a loop fingerprint? **65%**
18. Describe a whorl fingerprint. **Circular patterns. Must have at least 2 deltas and a core.**
19. What percent of the population has a plain whorl? an accidental whorl? **20%; 10%**
20. What is the difference between a radial loop and ulnar loop? **radial opens toward radius bone or thumb; ulnar loop opens toward ulna bone or pinky**
21. When inking a fingerprint, what should you NOT do? **you should not hold finger down in ink (will get too saturated); you should not roll finger on paper more than once (will smudge or smear)**
22. What is AFIS? **Automated Fingerprint Identification System; an automated system that helps to match fingerprints of crime scene to recorded fingerprints**
23. What is the Primary Classification System and what type of fingerprint pattern is it based on? **Based on Henry's Classification system, it uses a ratio to determine the primary classification of a suspect's set of prints (based on the presence of a whorl).**
24. Review the ridge characteristics (there will be pictures of them on your test).
25. What 4 elements are use to match fingerprints? **establish pattern, identify minutiae, determine 10 to 12 minutiae, establish location of minutiae**
26. What are the three types of prints? Describe/define each.
 - visible (formed by contact with colored material like ink or blood)**
 - plastic (ridge impressions left on soft material like putty)**
 - latent (caused by body transfer of oils present on finger ridges)**
27. What are the various chemical methods to reveal latent fingerprints? **iodine fuming, ninhydrin, cyanoacrylate (super glue)**
28. How does surface determine the chemical used? **Hard Surfaces: Use powder method or super-glue; Soft or Porous Surfaces: Use chemical methods; ninhydrin- paper, cardboard, and unpainted surfaces; silver nitrate on wet surfaces; super glue (cyanoacrylate) on nonporous surfaces**
29. What other methods besides chemicals can be used to reveal prints? **light (fluorescence) such as UV reveals latent prints (RUVIS).**