**Math and Science in LPSCS Exam**

**Matching:**

\_\_\_\_\_1. What is the science of numbers and their operations, interrelations, combinations, generalizations, and abstractions; and of space configurations and their structure, measurement, transformations, and generalizations?

\_\_\_\_\_2. What is knowledge or a system of knowledge covering general truths or the operation of general laws especially as obtained and tested through scientific method?

\_\_\_\_\_3. What institution do many agencies in the criminal justice system require a person to go to that requires a person to graduate from high school and take tests that cover math and science skills?

\_\_\_\_\_4. David is a State Trooper stationed at a weigh station. At this station, he also confirms that all of the lights of tractor trailers are at the proper length. What type of math does he use?

1. College
2. Math
3. Measurements
4. Science

\_\_\_\_\_5. In what area do prime numbers, factoring, algorithms, and the like play a big role?

\_\_\_\_\_8. Susan is a detective. She is sketching a crime scene involving a dead body. She wants to accurately show on the diagram where the body is located. What type of math will she be using to determine this?

1. Internet Security
2. Accident Investigation
3. Patrol
4. Measurements

\_\_\_\_\_9. In criminal profiling, what function of math is applicable?

\_\_\_\_\_10. What is recognized as a single solution in math?

\_\_\_\_\_11. Vanessa is a crime scene investigator who lifted fingerprints on a window at a crime scene. She will return to the police station to see if they match any fingerprints the

police department has on file. What type of math will she use to find a positive identification of the fingerprints?

\_\_\_\_\_12. Trooper Smith is investigating a traffic accident. He measures the skid marks to help

1. Patterns and Comparisons
2. Uniqueness
3. Algebra
4. Probability

\_\_\_\_\_13. What scientific device is used to determine the blood alcohol content in a person’s blood?

\_\_\_\_\_14. What does the Law of Conservation of Momentum apply to?

\_\_\_\_\_15. What scientific principle applies to police radar guns?

\_\_\_\_\_16. Jim is a patrol officer who finds a large amount of marijuana. What type of math will he use to determine the exact punishment of the suspect who possessed this marijuana?

1. Accident Investigation
2. Doppler Effect
3. Breathalyzer
4. Measurements or Conversions

\_\_\_\_\_17. Detective Tom finds hair at a crime scene. What type of unique biological thing will Tom analyze to try to determine the identity of the owner of the hair?

\_\_\_\_\_18. Julie is a detective. She responds to a call involving a dead body. She suspects it is a drug overdose. What kind of science will she need to determine if this is true?

\_\_\_\_\_19. Scott is a detective who responds to a call where a skeleton has been dug up at a construction site. What kind of science will he use to determine the age and sex of this skeleton?

\_\_\_\_\_20. Bob is a detective working on a murder case. The murder weapon is dropped off at the police station for him by a person who refuses to be identified. Bob notices that there is a lot of dirt on the weapon. What type of science will Bob need to use to determine where the weapon might have come from?

1. DNA
2. Geology
3. Forensic Anthropology
4. Toxicology

21. Fire Captain Joe is in charge of extinguishing a fire on the highway that involves an overturned tractor trailer carrying oil. Which extinguishing agent should he choose to fight the fire?

\_\_\_\_\_22. Fire Captain Joe is in charge of fighting a huge, grass fire. What would be his best method of fighting the fire?

\_\_\_\_\_23. Fire Captain Joe arrives on the scene of a fire that is being fueled by a gas line. What would be the best method of fighting this fire?

\_\_\_\_\_24. Fire Captain Joan is in charge of fighting a fire that is consuming a house. What is the best thing to use to fight this fire?

\_\_\_\_\_25. Fire Captain Joan is in charge of fighting a fire at a junk yard that is mostly contained within the limits of the property by a steel fence. What would be the best method for her to command her firefighters to fight this fire?

1. Starving a Fire
2. Firefighting Foam
3. Breaking Up the Fuel
4. Counter burning
5. Water