

**WV Fire Apparatus Driver Operator Module 3  
Study Guide**

1. Define the following abbreviations:
  - a. FL
  - b. NP
  - c. PDP
  - d. C
  - e. Q
  - f. L
  - g.  $d^2$
  - h. GPM
  - i. PSI
2. Know how to use the following formulas:
  - a.  $FL = C Q^2 L$
  - b.  $GPM = 29.7 d^2 \sqrt{NP}$
3. Know the coefficient for 2 ½" hose.
4. Identify the PSI exerted by a one square inch column 12 inches high.
5. Identify the following operating nozzle pressures for:
  - a. Smooth bore tip on a hand line and master stream
  - b. Fog nozzle on a hand line and master stream.
6. Explain how to do a pump capacity test.
7. Explain how to determine PDP.
8. Identify the purpose of the circulator valve.
9. Identify the steps for relay operations.
10. Identify the parts of a water distribution grid system.
11. Explain how an in-line foam eductor works.
12. Identify the collapse zone.
13. Define residual pressure.
14. Explain the difference between a forward lay and a reverse lay.
15. Explain the purpose of a relief valve.
16. Identify maximum discharge pressure used with standpipe systems.
17. Explain how an exhaust primer works.
18. Explain how to calculate for elevation pressure loss/gain.
19. Identify the driver/operators responsibilities in regards to pump operations.
20. Define net pump discharge.
21. Identify appliances carried on the apparatus.
22. Define dependable lift.
23. Explain the differences between operating a fire pump in pressure and parallel.
24. Identify FL added for a standpipe system.
25. Explain the purpose of an auxiliary cooler.
26. Describe what a pitot tube is used for.
27. Explain the color code system for determining GPM of hydrants.
28. Identify and explain the three methods used to apply foam.
29. Explain the differences between a wet and dry standpipe system.
30. Identify minimum residual pressure.