

# Test Yourself



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**D**esigned to be a regular feature *The American Surveyor*, this column will challenge you with basic “textbook” questions and questions based on surveying practice. The questions will be of a quality and degree of difficulty similar to those posed on the Fundamentals of Land Surveying (FLS) Exam and the Principles and Practice of Land Surveying Exam which are prepared and scored by the National Council of Examiners for Engineering and Surveying (NCEES). The questions will use the NCEES multiple choice format with four possible answers.

In this inaugural issue, we offer a set of questions that are within the syllabus of the FLS exam. In future issues, we will offer questions of the type found on the Principles and Practice exam, as well as some calculation-based problems.

So go ahead, test yourself and circulate these questions around the office. Remember, the NCEES FLS exam is a closed book exam, with a reference sheet of equations provided. The exam contains 170 questions, which you are given eight hours (in two four-hour blocks) to complete. These 10 questions, therefore, would represent one-seventeenth of the exam. Assuming these ten are representative, you should give yourself about 28 minutes to answer these questions.

For answers to these questions (and much more), please visit our website at: [www.TheAmericanSurveyor.com](http://www.TheAmericanSurveyor.com).

Good luck! 

For more information about the FLS exam and its contents, visit the NCEES website at [www.ncees.com](http://www.ncees.com).

### 1. A horizontal line is one that is

- perpendicular to the direction of gravity at all points.
- perpendicular to the direction of gravity at a point.
- concentric with the surface of the earth.
- affected by refraction of the earth's atmosphere.

### 2. Accuracy is most closely associated with

- the care used in making a measurement.
- the refinement of quality of instrument construction.
- the repeatability of a measurement.
- how close a measurement is to the true value.

### 3. Concerning the location of an old property corner, oral testimony from a long time resident who remembers seeing the original corner post is

- hearsay evidence.
- intrinsic evidence.
- latent evidence.
- parol evidence.

### 4. You plan to plot the following traverse on a sheet with dimensions of 18 inches wide by 24 inches long.

AB:S 0°25'E	1380.02 feet
BC:N88°31'W	2495.00 feet
CD:N 0°25'W	1380.02 feet
DA:S88°31'E	2495.00 feet

### The best-suited scale to show maximum detail and to allow for a half-inch margin, is

- 1:1440.
- 1:1200.
- 1:960.
- 1:600.

### 5. Concerning the location of record title boundaries, the order of importance of conflicting elements is

- Area
  - Artificial monument
  - Direction and distance
  - Natural monument
  - Senior right
- 3, 1, 4, 2, 5.
  - 4, 2, 3, 1, 5.
  - 5, 3, 1, 4, 2.
  - 5, 4, 2, 3, 1.

### 6. The definition of a navigable river

- is that it is navigable in fact.
- is that it is capable of floating a boat of the lightest draft during normal flood time.
- is that it is used or susceptible of being used for commercial transportation of goods and/or recreational purposes during a significant portion of the year.
- may be significantly different depending on the state.

### 7. A line scales 1.62 inches on a topo map having a scale of 1:36,000 and a contour interval of 20 feet. The length of the line on the ground is approximately

- 3,210 chains.
- 1,480 meters.
- 15,900 meters.
- 22,200 feet.

### 8. The instrument is set up at the PC with an angle of 5°25' being measured between stations 147+50 and 150+00 on a highway curve. The degree of curve (arc definition) is

- 2°10'.
- 2°30'.
- 4°20'.
- 5°25'.

### 9. In running a line of levels, a 210-foot sight was made with a rod reading of 10.500 feet recorded. When the reading was made, the top of the 12-foot rod was 9 inches out of plumb. The corrected rod reading is

- 10.473.
- 10.479.
- 10.521.
- 10.500 (error is insignificant).

### 10. A traverse 10,000 feet in total length closes by 0.40 feet in latitude and -0.60 feet in departure. The ratio of precision (ROP) is

- 1/10,000.
- 1/14,000.
- 1/50,000.
- 1/100,000.