

# SAMPLE QUESTIONS

## Arkansas State Specific Exam

The Arkansas State-Specific Exam is split into two parts and examines seven subject areas: **Part I, General:** “Arkansas Standards of Practice for Property Boundary Surveys and Plats,” Arkansas Statutes and Board Rules, Arkansas State Plane Coordinate System, and Arkansas Riparian Boundaries. **Part II, Public Lands:** Arkansas’ Original GLO System, Resurveys on Arkansas’ USPLSS, and numerical calculation problems concerning reestablishment of lost corners on Arkansas’ USPLSS. Part I is one hour. Part II is 1.5 hours.

### Part I, General, representative questions:

- 3 pts.      1.)    The “Arkansas Standards of Practice for Property Boundary Surveys and Plats” are:
- (a) published by the State Board.
  - (b) to be used as a guideline by any land surveyor duly licensed to practice in the State.
  - (c) binding upon any person licensed to perform surveying services in the State.
  - (d) contained in the statutes.
- 3 pts.      2.)    The term “responsible charge”:
- 1.) shall mean direct control
  - 2.) means shall be a principal in the firm.
  - 3.) means should be a principal in the firm.
  - 4.) shall be control such that the client may reasonably presume that the registrant is the provider of the services.
- (a) 2
  - (b) 4
  - (c) 1, 4
  - (d) 1, 3, 4

- 3 pts. 3.) In addition to the client, copies of a rural boundary survey plat shall be distributed to:
- 1.) County Surveyor's Office.
  - 2.) State Surveyor's Office.
  - 3.) County records (County or Circuit Clerk).
  - 4.) State General Land Office.
  - 5.) State Land Commissioner's Office.
- (a) 1, 2, 3, 4, 5
- (b) 1, 2, 3, 5
- (c) 3
- (d) 2
- 2 pts. 4.) Professional Land Surveyors
- (a) shall assist nonregistrants in the practice of land surveying.
- (b) can accept compensation from more than one party for services pertaining to the same project.
- (c) may reveal privileged information to another surveyor without the consent of owner.
- (d) None of the above.
- 2 pts. 5.) For the Arkansas State Plane Coordinate System, grid distance and ground distance are
- (a) the same at the Central Meridian.
- (b) parallel with each other.
- (c) related by elevation and north-south position in the zone.
- (d) related by elevation and east-west position in the zone.

- 4 pts.      6.)      Barring some unusual circumstances, in Arkansas, a riparian landowner owning land adjoining a nonnavigable river has title to
- (a) the water's edge.
  - (b) the high bank line.
  - (c) river's thread.
  - (d) river's thalweg line.

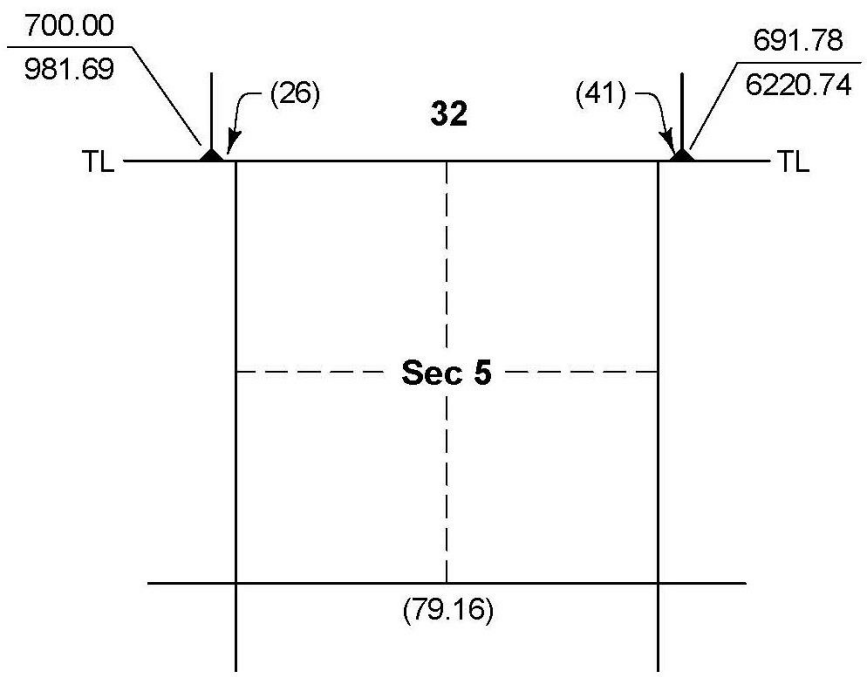
Part II, USPLSS, representative questions:

- 4 pts.      7.)    On a GLO plat of a township you notice that the north-south dimensions of the interior sections such as 15, 16, 17, 20, 21, 22, 23 are not shown on the plat. The reason for this is:
- (a) The GLO draftsman made a mistake and left them off.
  - (b) Since these dimensions are not used in retracement surveys, they are not shown.
  - (c) They are understood to be exactly 80.00 chains record.
  - (d) They must be calculated by proportioning from the dimensions given on the township's range lines.
- 6 pts.      8.)    Double proportionate measure is used to re-establish which of the following lost corners?
- 1.) Township corner on a correction line.
  - 2.) Normal township corner.
  - 3.) Section corner in the interior of a township.
  - 4.) Center of section.
  - 5.) Section corner on a range line or township line.
- (a) 2, 3, 5
  - (b) 1, 2, 3, 5
  - (c) 3, 4
  - (d) 2, 3
- 4 pts.      9.)    Recovered original township, section, and quarter section corners must be considered as the \_\_\_\_\_ corner positions which they were intended to represent.
- (a) approximate
  - (b) original
  - (c) true
  - (d) none of the above

- 4 pts. 10.) Closing corners monumented in the original GLO surveys are normally found on:
- (a) both range and township lines.
  - (b) standard parallels only.
  - (c) range lines only.
  - (d) township lines only.
- 2 pts. 11.) Of the four public land survey corners listed below, which would be "senior"?
- (a) Section corner.
  - (b) Corner on standard parallel (or, correction line).
  - (c) Meander corner.
  - (d) Quarter corner.

9 pts. 12.) In the figure below, GLO dimensions are shown in parentheses. Existent corners are noted with darkened symbols. The coordinates shown (north over east, in feet) are your measured values. All other intervening corners have been declared lost. Compute the coordinates of the North Quarter Corner of Section 5.

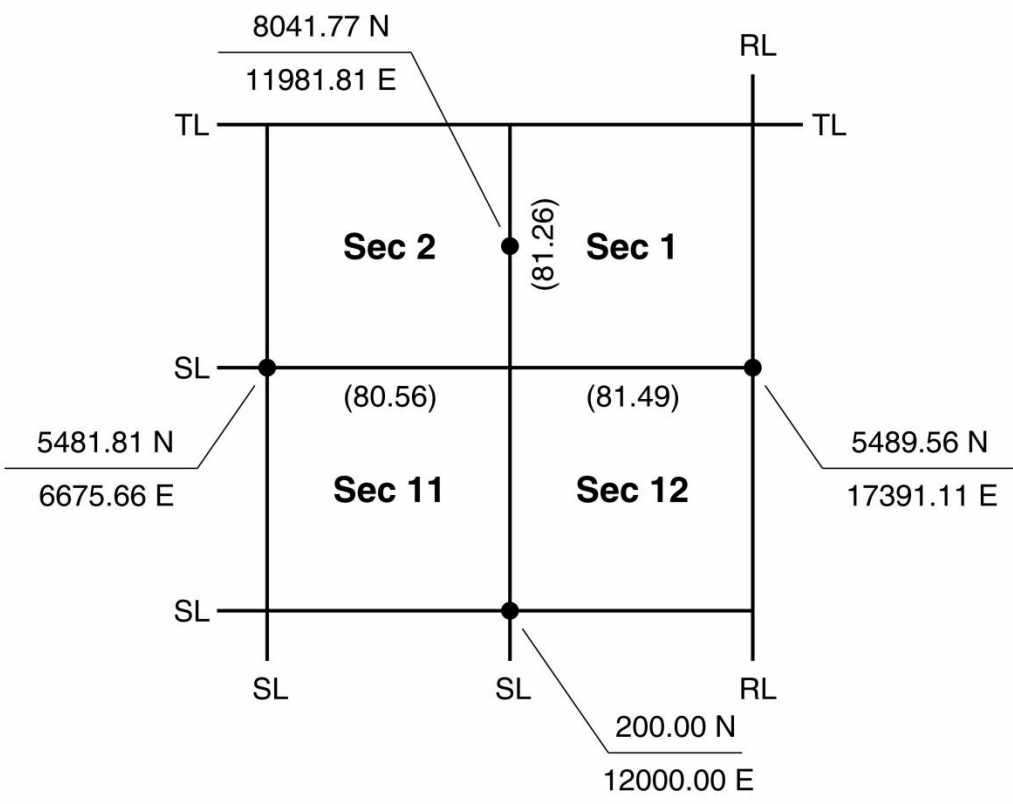
Compute the answer to the nearest 0.01 foot. On this sheet show all work that supports your solution. Partial credit (if warranted) will be awarded. Do not merely provide an answer. Show the work that resulted in the answer shown.



North =
East =

- 13 pts. 13.) In the figure below, GLO dimensions are shown in parentheses. Existent corners are noted with darkened symbols. The coordinates shown (north over east, in feet) are your measured values. All other intervening corners have been declared lost. Compute the coordinates to reestablish the lost corner to Sections 1, 2, 11 and 12.

Compute the answer to the nearest 0.01 foot. On this sheet show all work that supports your solution. Partial credit (if warranted) will be awarded. Do not merely provide an answer. Show the work that resulted in the answer shown.



North =
East =

Answers and Solutions

1.) c

2.) c

3.) d

4.) d

5.) c

6.) c

7.) c

8.) d

9.) c

10.) a

11.) b



- 12.) This is the establishment, not the reestablishment, of the north quarter corner of Section 5. This will require a single proportion between the existent corners noted. One must know the GLO plat protracted distance for the north line of the northeast quarter is the same distance as the south line of the southeast quarter (39.58 chains in this example).

For the north coordinate:

$$(700.00 - 691.78) \frac{39.58 + 0.41}{80.00} + 691.78 = 695.89 \text{ feet}$$

For the east coordinate:

$$(981.69 - 6220.74) \frac{39.58 + 0.41}{80.00} + 6220.74 = 3601.87 \text{ feet}$$

- 13.) This is the reestablishment of a lost section corner in the interior of a township. The solution is by double proportioning. This solution will be by proportioning coordinates.

First for the north coordinate. The reestablishment north-south position must be exactly two-thirds of the way from the corner of Sections 11, 12, 13 and 14 to the Quarter Corner of Sections 1 and 2. (Knowing the GLO dimension for the west side of Section 12 would be 80.00 chains and the GLO dimension for the west line of the Southwest Quarter of Section 1 would be 40.00 chains.) So:

Reestablished north coordinate position:

$$(8041.77 - 200.00) \frac{80.00}{120.00} + 200.00 = 5427.85 \text{ feet}$$

For the east coordinate. The reestablished east-west position must be exactly at the GLO proportioned dimension,  $80.56/(80.56+81.49)$  of the way from the corner of Sections 2, 3, 10 and 11 to the Standard Corner of Sections 1 and 12. So:

Reestablished east coordinate:

$$(17,391.11 - 6675.66) \frac{80.56}{80.56 + 81.49} + 6675.66 = 12,002.64 \text{ feet}$$