



2005 State Competition  
FFA Agricultural Mechanics Contest  
University of Missouri  
50 points

Name \_\_\_\_\_  
Contestant Number \_\_\_\_\_  
Chapter \_\_\_\_\_

---

### Soil and Water Management

**\*\*Any Individuals caught tampering with or touching any plots or equipment on Sanborn field will be disqualified immediately!\*\***

1. Use the engineer's chain (tape) to find the area of plot D if the long edge is 115ft.
  - a. 2875.2 sq. ft.
  - b. 3737.5 sq. ft.
  - c. 3473 sq. ft.
  - d. 3852.5 sq. ft.
  
2. What is the name of tool tagged 1?
  - a. Engineers level
  - b. Transit
  - c. Hand level
  - d. Stand level

3. What is the section number of x?

					X
			Y		

- a. 12
- b. 9
- c. 13
- d. 27

4. Section Y of the township illustrated for problem three is below. What is the legal land description of B?

	E	B	C
		F	A
	G	H	
		I	

- a. W 1/2, NW 1/4, NW 1/4
- b. W 1/2, NE 1/4, NE 1/4,
- c. W 1/2, NE 1/4, NW 1/4
- d. W 1/2, SE 1/4, NW 1/4

5. Farmer Ted - row crop farms all lettered sections above except subsection C (refer to illustration number four), where he has his home and farm, which is 5 miles from town. How many acres does farmer Ted row crop farm?

- a. 240 ac
- b. 250 ac
- c. 230 ac
- d. 220 ac

6. What is tool tagged #2?

- a. Engineers chain
- b. Gunter's chain
- c. Logging chain
- d. Measuring chain

7. Finish the field notes below sufficiently to determine the elevation at BM2.

## Surveying Field Notes Differential Leveling

Station	Back-Sight	Height of Instrument	Fore-Site	Elevation	Distance
B.M. 1	4.81			100.00'	
		104.81			220'
T.P. 1	4.06		2.40		299'
					308'
B.M.2	2.83		3.03		318'
					275'
T.P.2	1.49		3.38		202'
					201'
B.M. 1			4.35		

8. Read the residue tool kit and find the percentage(%) coverage of residue on the plot.

Find Estimated % of soil currently covered.

- a. 20
- b. 40
- c. 60
- d. 80

9. Use designated level (and stadia hair) and Philadelphia rods to find the distance between points E & F.

- a. 62
- b. 64
- c. 68
- d. 71

10. Determine the distance between points O & P by pacing the distance between them. If the difference in elevation between O & P is 3 ft, what is the percent of slope?

- a. 2%
- b. 4%
- c. 6%
- d. 8%