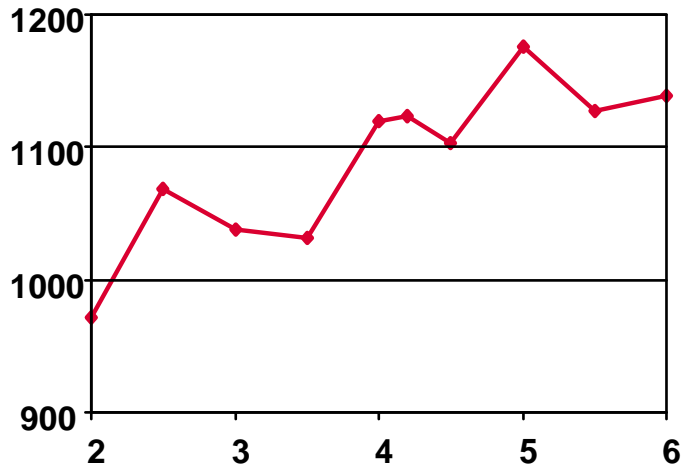


Carefully read the description of the experiment below. Be prepared to answer the questions that follow the design description as a class quiz.

ABSTRACT: Cotton producers are looking for ways to economize on cottonseed when it comes to planting, but without sacrificing yields. A study was conducted on a producers' field in Claiborne County 3 miles east of Port Gibson on upland loamy soil to evaluate planting population densities. Cotton was planted on 4 raised beds which were rolled to provide a smooth planting surface. On each of the 4 raised beds, seeds were planted on 10 plots of 4 rows per plot. Seeds were planted in the 10 plots at densities of 2, 2.5, 3, 3.5, 4, 4.2, 4.5, 5, 5.5 and 6 seeds/ft of row. Densities were randomly assigned to the 10 plots in each of the 4 beds (40 plots in all) such that each density occurred once in each bed. Cotton was then picked in mid-October with a picker adapted for picking each 4-row plots as a single sample. The variable of interest was lint yields, which ranged from 1176 lb lint/ac with 5 seeds/ft of row to 972 lb lint/ac with 2 seeds/ft of row. The 5 and 6 seeds/ft of row yields were significantly higher than the other seeding rates.

Table 1. Plant population and lint yield of cotton planted in seed spacing test.

Seed planted / ft of Row	Plant Population	Lint Yield/ac
2.0	27,000	972
2.5	34,000	1069
3.0	41,000	1038
3.5	48,000	1031
4.0	55,000	1120
4.2	57,000	1124
4.5	61,000	1103
5.0	68,000	1176
5.5	75,000	1127
6.0	82,000	1139
LSD	0.05	160



Answer choices:	(A) a row	(B) a bed	(C) a plot
	(D) yield	(E) seeds	(F) densities

Name _____ Quiz Number ____ Date ____ / ____ / 2012

Circle the appropriate letter for each question.

- 1) What is the experimental unit for this experiment? A B C D E F
- 2) What is the sampling unit for this experiment? A B C D E F
- 3) What is the dependent variable for this experiment? A B C D E F
- 4) What is the treatment variable for this experiment? A B C D E F
- 5) If the design is RBD, what are the blocks? A B C D E F NA
- 6) Does it seem more likely that the treatments are fixed or random? (A) fixed (B) random
- 7) What is the treatment arrangement for this experiment? (A) single factor (B) factorial (C) nested
- 8) What is the experimental design? (A) CRD (B) RBD (C) LSD (D) Split-plot (E) Repeated Measures
- 9) The treatment degrees of freedom are _____.
- 10) The degrees of freedom for the error used for testing treatments are _____.