

Appendix B

The Population Surveyed

Total population surveyed: 102

Age range: 21-72

Median age: 33

Income: Over two-thirds earned annual salaries of at least \$20,000.

Sex: 57 females and 45 males

Education: All completed at least 4 years of college. 32 females and 24 males had completed at least one year of graduate studies. No one with a degree in mathematics, engineering, or physics was given the test.

Race: All but two were Caucasian.

Testing Conditions

Time allotted: As much as needed

Place: Local coffee houses in the New Orleans area

Calculators: Not permitted

The Test

Ten questions were given requiring competency in seventh grade arithmetic. Problems ranged from simple addition with whole numbers to fraction addition with unlike denominators. The results of problem #3 ($200/.8$) are suspect because 29 out of 51 who incorrectly answered problem #3 gave the answer as 25 instead of 250 (see the

next page for the test). There is the strong possibility that many failed to see the decimal point in the problem.

The test is reproduced below.

Survey

Age _____ sex _____ Profession _____

Income:

\$0-\$10,000 \$10,000-\$15,000 \$15,000-\$20,000
 \$20,000-\$25,000 \$25,000-\$35,000 above \$35,000

Education* (circle one):

K 1 2 3 4 5 6 7 8 9 10 11 12

College 1 2 3 4 Graduate 1 2 3 4 5

Degree(s) Earned _____

Major(s) _____

Please answer all questions to the best of your ability. No calculators are permitted. If needed, use any free space for scratch work on this paper.

1. $15 + 43 =$ _____
2. $17.09 + 14.8 =$ _____
3. $200 \div .8 =$ _____
4. $8.5 \times 9.2 =$ _____
5. $2/7 + 4/9 =$ _____

6. $3/8 \times 5/11 =$ _____

7. $1/3$ of $1/12 =$ _____

8. $2/7 \div 4/9 =$ _____

9. 25% of 80 = _____

10. 8% of \$6.00 = _____

* Only those surveys with at least four years of college were used. (See next page for answers.)

The results for all 102 participants are provided in Table form below and in Appendix B Figures 1-5.

Table B1

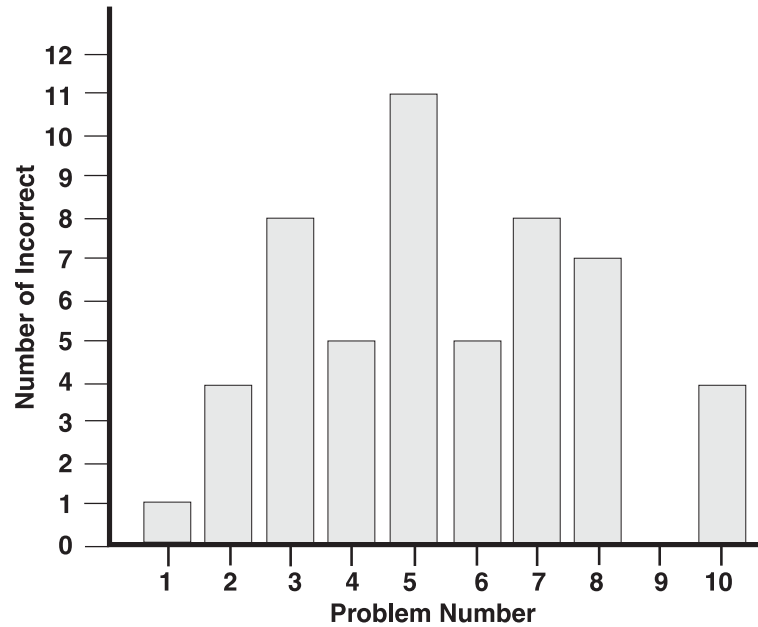
Problem Number	Number Answered Incorrectly
1	1
2	14
3	51 [22] ^{1*}
4	26
5	46
6	27
7	40 ^{2*}
8	42
9	6
10	25

The answers to the test are:

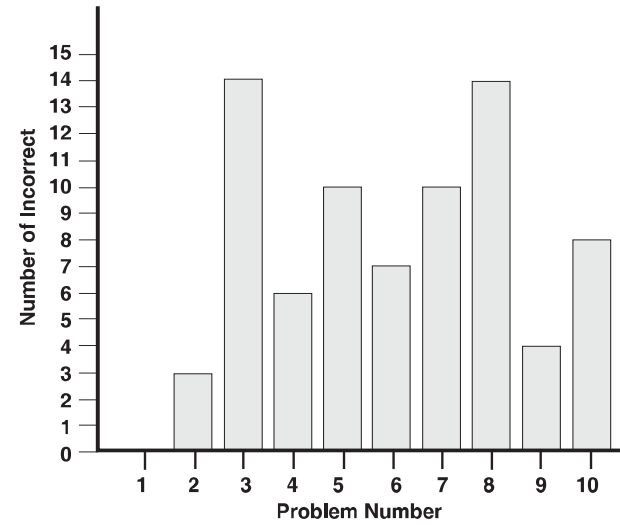
- 1) 58 2) 31.89 3) 250 4) 78.2 5) 46/63 6) 15/88
 7) 1/36 8) 18/28 or 9/14 9) 20 10) 48¢

*1 See comment on previous page regarding problem #3.

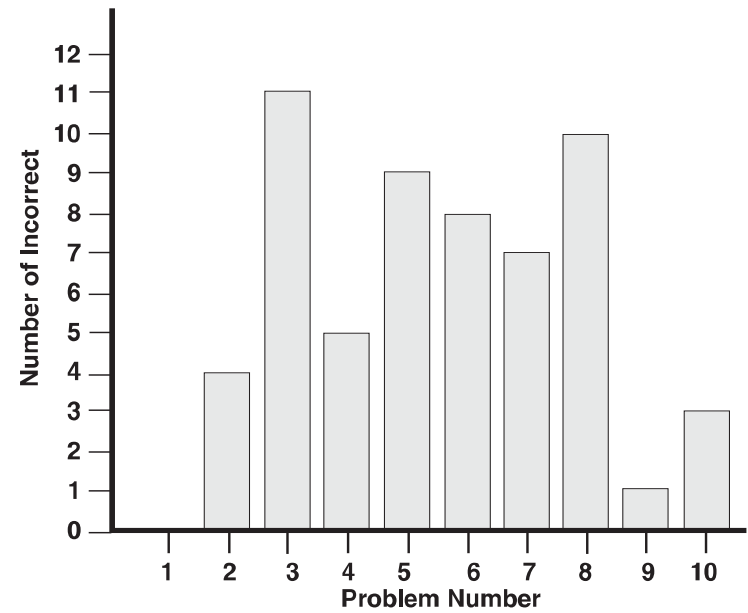
*2 3 out of the 102 tests did not include this problem.



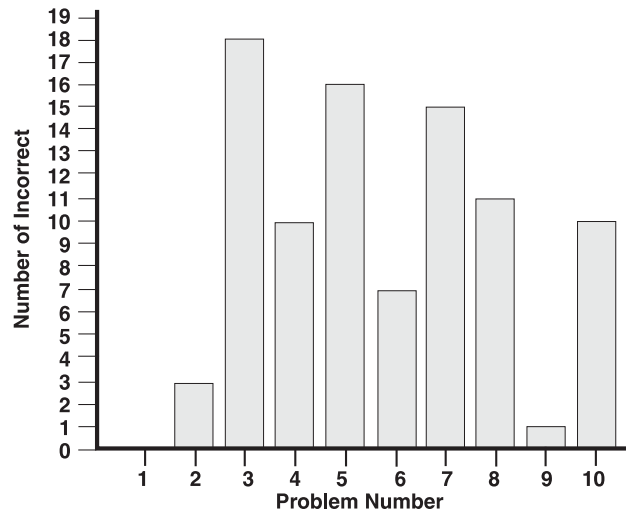
Appendix B Figure 1
 Statistics for 21 males with four years of college.



Appendix B Figure 2
 Statistics for 25 females with four years of college.

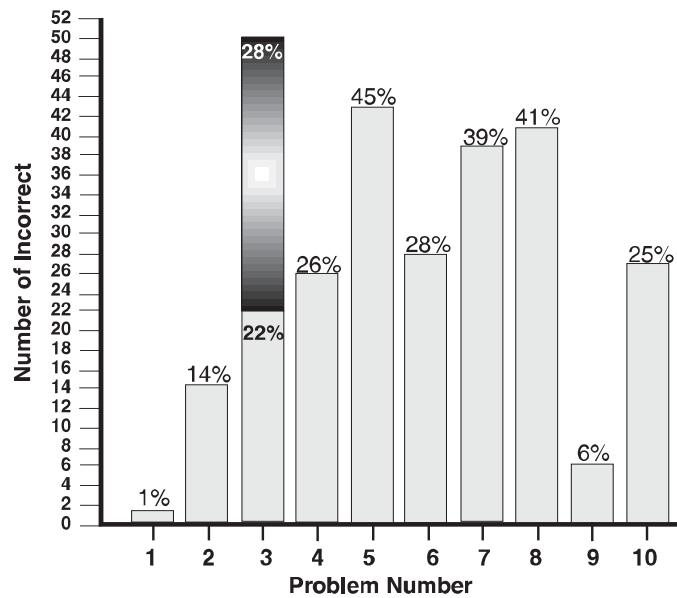


Appendix B Figure 3
 Statistics for 24 males with more than four years of college.



Appendix B Figure 4

Statistics for 32 females with more than four years of college.



Appendix B Figure 5

Cumulative statistics for all four groups (102 people surveyed).