**STAT 200 Introduction to Statistics Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Final Examination: Summer 2017 OL3/US2 Instructor \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Answer Sheet**

**Instructions:**

This is an open-book exam. You may refer to your text and other course materials as you work on the exam, and you may use a calculator.

Record your answers and work in this document.

**Answer all 20 questions. Make sure your answers are as complete as possible. Show all of your work and reasoning. In particular, when there are calculations involved, you must show how you come up with your answers with critical work and/or necessary tables. Answers that come straight from calculators, programs or software packages without explanation will not be accepted. If you need to use technology to aid in your calculation, you have to cite the source and explain how you get the results. For example, state the Excel function along with the required parameters when using Excel; describe the detailed steps when using a hand-held calculator; or provide the URL and detailed steps when using an online calculator, and so on.**

Show all supporting work and write all answers in the spaces allotted on the following pages. You may type your work using plain-text formatting or an equation editor, or you may hand-write your work and scan it. In either case, show work neatly and correctly, following standard mathematical conventions. Each step should follow clearly and completely from the previous step. If necessary, you may attach extra pages.

**You must complete the exam individually. Neither collaboration nor consultation with others is allowed. It is a violation of the UMUC Academic Dishonesty and Plagiarism policy to use unauthorized materials or work from others. Your exam will receive a zero grade unless you complete the following honor statement.**



**Record your answers and work.**

|  |  |
| --- | --- |
| **Problem Number** | **Solution** |
| 1 | Answer:(a) (b) (c) (d) (e) Justification: |
| 2 | Answer:(a) (b) (c) Justification: |
| 3 | Answer:(a)

|  |  |  |
| --- | --- | --- |
| Study Time (in hours) | Frequency | Relative Frequency |
| 0.0 – 4.9 | 6 |  |
| 5.0 - 9.9 | 24 |  |
| 10.0 - 14.9 | 50 |  |
| 15.0 -19.9 |  | 0.35 |
| 20.0 – 24.9 |  |  |
| Total | 200 |  |

(b) (c) Work for (a) and (b): |
| 4 | Answer: (a) (b) (c)Justification:  |
| 5 | Answer: (a) (b) Work for (a) and (b): |
| 6 | Answer: (a) (b) Work for (b):  |
| 7 | Answer: (a) (b) Work for (a) and (b):  |
| 8 | Answer: (a) (b) Work for (a) and (b): |
| 9 | Answer: Mean = Standard Deviation = Work: |
| 10 | Answer:(a) (b) Work for (b) : |
| 11 | Answer: (a) (b) Work for (a) and (b):  |
| 12 | Answer: (a)(b)Work for (a) and (b):  |
| 13 | Answer: Work:  |
| 14 | Answer: Work: |
| 15 | Answer:(a) $.$(b) (c) (d) Work for (b) and (c): |
| 16 | Answer:(a)(b) (c) (d) Work for (b) and (c): |
| 17 | Answers:(a) (b) (c)(d)Work for (b) and (c): |
| 18 | Answer:(a) (b) (c) (d) Work for (b) and (c):  |
| 19 | Answer:(a) (b) Work for (a) and (b): |
| 20 | Answer:(a)

|  |  |  |  |
| --- | --- | --- | --- |
| Source of Variation | Sum of Squares*(SS)* | Degrees of Freedom *(df)* | Mean Square*(MS)* |
| Factor(Between) | 42.5 |  |  |
| Error(Within) |  |  |  |
| Total | 553.05 | 239 | N/A |

(b) (c)(d)Work for (a), (b) and (c): |