

Elementary Statistics

Name: _____

Study Guide 5

Class: _____

Due Date: _____

Score: _____

No Work \Leftrightarrow No Points

Use Pencil Only \Leftrightarrow Be Neat & Organized

1. Consider the sample below:

2 0 5 5 4 10 1 5

(a) (1 point) Find the sample size.

(a) _____

(b) (1 point) Find the sample mode.

(b) _____

(c) (2 points) Find $\sum x$.

(c) _____

(d) (2 points) Find $\sum x^2$.

(d) _____

(e) (2 points) Find \bar{x} . Round your answer to one decimal place.

(e) _____

(f) (2 points) Find s^2 . Simplify your answer to a reduced fraction.

(f) _____

(g) (2 points) Find s . Round your answer to one decimal place.

(g) _____

2. Consider the sample below:

20 10 15 8 14 15 18 5 12 20 10 16

(a) (2 points) Find the sample median.

(a) _____

(b) (2 points) Find $\sum x$.

(b) _____

(c) (2 points) Find $\sum x^2$.

(c) _____

(d) (2 points) Find \bar{x} . Round your answer to one decimal place.

(d) _____

(e) (2 points) Find s^2 . Simplify your answer to a reduced fraction.

(e) _____

(f) (2 points) Find s . Round your answer to one decimal place.

(f) _____

(g) (2 points) Estimate s by using the range rule-of-thumb.

(g) _____

3. Given: $n = 20$, $\sum x = 1570$, $\sum x^2 = 125696$, minimum = 60, and maximum = 100

(a) (2 points) Estimate s by using the range rule-of-thumb.

(a) _____

(b) (1 point) Find the sample midrange.

(b) _____

(c) (2 points) Find \bar{x} . Round your answer to a whole number.

(c) _____

(d) (2 points) Find s^2 .

(d) _____

(e) (2 points) Find s . Round your answer to a whole number.

(e) _____

(f) (2 points) Using the rounded answers, find the 68% range.

(f) _____

(g) (2 points) Using the rounded answers, find the 95% range.

(g) _____

4. The following calculator displays present the basic computational statistics on a randomly selected sample.

```

1-Var Stats
x̄=80.12
Σx=2003
Σx²=163757
Sx=11.68446262
σx=11.44838853
↓n=25
  
```

```

1-Var Stats
↑n=25
minX=54
Q1=73
Med=80
Q3=89
maxX=100
  
```

(a) (2 points) Find the range and the midrange.

(a) _____

(b) (2 points) Find the usual range of the sample after rounding the sample mean and standard deviation to a whole number.

(b) _____

(c) (3 points) Draw its box plot and clearly label it.

(d) (1 point) Find its IQR.

(d) _____

(e) (3 points) Find the upper and lower fence of the sample.

(e) _____