**HW2: Descriptive Statistics—Dispersion**

1. You are given the following test scores for a Math quiz.

|  |  |
| --- | --- |
| Score | Frequency |
| 20 | 2 |
| 19 | 1 |
| 18 | 4 |
| 17 | 6 |
| 16 | 7 |
| 15 | 10 |
| 14 | 15 |
| 13 | 9 |
| 12 | 6 |
| 11 | 2 |
| 10 | 1 |
| 9 | 2 |
| 8 | 1 |
| 7 | 0 |

1. What is the range for the above data? (1 pt)
2. Calculate the variance and the standard deviation for the above distribution or indicate why they cannot be calculated. (2 pts)
3. The following distribution of “happiness scores” was obtained from a sample of married women.

|  |  |
| --- | --- |
| Happiness Score | Number of Wives |
| 0-2 | 4 |
| 3-5 | 8 |
| 6-8 | 10 |
| 9-11 | 12 |
| 12-14 | 25 |
| 15-17 | 32 |
| 18-20 | 6 |
| 21-23 | 2 |
| 24 and over | 0 |

1. What is the range for the above distribution? (1 pt)
2. Calculate the standard deviation and the variance for the above distribution or indicate why they cannot be calculated. (2 pts)