Exercises

1. Complete the following table.

|  |  |  |
| --- | --- | --- |
| Grade on Exam | Frequency | Relative Frequency |
| A: 90-100 |  | 0.08 |
| B: 80-89 | 36 |  |
| C: 65-79 | 90 |  |
| D: 50-64 |  | 0.15 |
| F: Below 50 | 28 |  |
|  |  |  |
| Total | 200 | 1.00 |

2. A qualitative variable with three classes (X, Y, and Z) is measured for each of 20 units randomly sampled from a target population. The data (observed class for each unit) are listed below.

Y X X Z X Y Y Y X X Z X Y Y X Z Y Y Y X

(a) Complete the frequency for each of the three classes.

(b) Compute the relative frequency for each of the three classes.

(c) Display the results, part (a), in a frequency bar graph.

(d) Display the results, part (b), in a pie chart.

3. Graph the relative frequency histogram for the 500 measurements summarized in the accompanying relative frequency table.

|  |  |
| --- | --- |
| Measurement | Relative Frequency |
| 0.5 – 2.5 | 0.10 |
| 2.5 – 4.5 | 0.15 |
| 4.5 – 6.5 | 0.25 |
| 6.5 – 8.5 | 0.20 |
| 8.5 – 10.5 | 0.05 |
| 10.5 – 12.5 | 0.10 |
| 12.5 – 14.5 | 0.10 |
| 14.5 – 16.5 | 0.05 |

4. Refer to Exercise 3. Calculate the number of the 500 measurements falling into each of the measurement classes. Then graph a frequency histogram for these data.