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STATISTICS FOR DATA SCIENCE

ASSIGNMENT 9

1. The Editor’s Report in the November 2003 issue of Technometrics provides the following information regarding the length of time taken to review articles that were submitted for publication during the year 2002. A few articles took longer than 9 months to review, these are omitted from the table.

a. Construct a histogram for these data.

b. Which class interval contains the median review time?

c. Which class interval contains the first quartile of the review times?

d. Which class interval contains the third quartile of the review times?

|  |  |
| --- | --- |
| Time (months) | Number of Articles |
| 0 – 1 | 45 |
| 1 – 2 | 17 |
| 2 – 3 | 18 |
| 3 – 4 | 19 |
| 4 – 5 | 12 |
| 5 – 6 | 14 |
| 6 – 7 | 13 |
| 7 – 8 | 22 |
| 8 – 9 | 11 |

Answer.

|  |  |  |  |
| --- | --- | --- | --- |
| **Time (months)** | **Number of Articles** | **Relative Frequency** | **Density** |
| 0 – 1 | 45 | 0.263 | 0.088 |
| 1 – 2 | 17 | 0.099 | 0.033 |
| 2 – 3 | 18 | 0.105 | 0.035 |
| 3 – 4 | 19 | 0.111 | 0.037 |
| 4 – 5 | 12 | 0.070 | 0.023 |
| 5 – 6 | 14 | 0.082 | 0.027 |
| 6 – 7 | 13 | 0.076 | 0.025 |
| 7 – 8 | 22 | 0.129 | 0.043 |
| 8 – 9 | 11 | 0.064 | 0.021 |
|  | Σ= 171 | Σ= 1 |  |

No. of bins = (Max-Min)/Band Width = (9-0)/3 = 3

