Grouped data and histograms: frequency and area — Further practice

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Further practice 11

Three nonoverlapping classes have frequencies 4,7,5. Find the total sample size.

Further practice 12

6 of 20 observations fall in one class. Find its percentage.

Further practice 13

Classes [0,2), [2,4), [4,6] have frequencies 2,4,2. For the frequency-distribution line graph, give the three class-midpoint/frequency points to connect in order.

Further practice 14

Choose the classes [0,5), [5,10), [10,15), [15,20] for values between 1 and 18. How many classes are there, and what is the common class width?

Extension 15

One density bar spans 0–10 with height 1. A second spans 10–40 with height 1/2. Which contains more observations? Explain why comparing height alone fails.

Extension 16

Use the same data $1, 1, 1, 1, 2, 2, 3, 3, 3, 3, 4, 5$. Regroup into $0 \le x < 3$ and $3 \le x \le 6$. Find frequencies and explain what total is preserved.