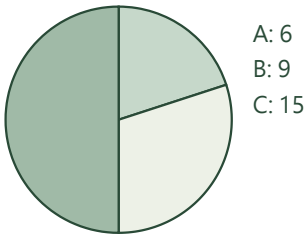
Statistical surveys: samples, proportions and claims — Further practice

Year 7, lower volume • text pp. 89–94 • textbook lessons 45–47

Further practice 11

Counts A=6,B=9,C=15 cover the whole group. Find A’ s central angle.



Use the stated conditions and the labelled scales.

Further practice 12

A table totals 50 observations; known counts are 12 and 18, with one missing category. Find the missing count.

Further practice 13

Testing the lifetime of a bulb destroys it. Should a factory test every saleable bulb to estimate lifetime? Give a suitable method.

Further practice 14

Two percentages are 40% and 50%. A chart begins its vertical axis at 39%, making visible bar heights 1 and 11. Does this mean the second percentage is eleven times the first?

Extension 15

Three age groups have population ratio 3:4:3. Choose a sample of 100 proportionally, then randomly within each group. How many from each? Does proportional allocation alone eliminate every possible bias?

Extension 16

A synthetic population has 1000 members, 500 choosing A. Two random samples of 40 contain 19 and 21 A choices. Must one sample have been selected incorrectly? Explain.