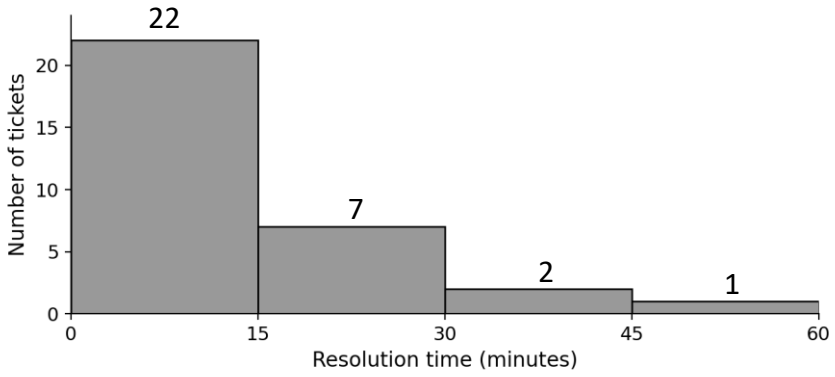
1.6 TASK: Bin Waiting

Name:

TechFixIt Solutions is an IT help desk deciding whether to hire an additional technician. Before deciding, the manager records the resolution time, in minutes and rounded to the nearest minute, for 32 randomly selected support tickets from last month. The histogram below shows the results.



1. What is the observational unit in this study? Classify the variable of interest as categorical or quantitative.

2. Using the histogram, describe the distribution of resolution times using CUSS in Context.

   Center:

   Unusual:

   Shape:

   Spread:

3. The manager claims, *"Less than 5% of the tickets took longer than 30 minutes to resolve so we good."* Using the histogram, determine whether the data support this claim. Justify your answer using specific features of the graph.

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4. Below is the raw data used to create the histogram. Construct a stemplot of this data.
   Resolution Times (minutes):

   2, 3, 3, 4, 4, 5, 5, 5, 6, 6, 6, 7, 7, 8, 8, 9, 10, 10, 11, 12, 13, 14, 16, 18, 20, 22, 25, 27, 28, 31, 33, 55

5. Now that you've built the stemplot, do you notice anything about this distribution that wasn't obvious from the histogram? Explain using specific values from the stemplot.

6. The histogram and the stemplot were built from the exact same 32 values, yet they told two very different stories. Explain why this happened. What does this tell you about the choices you make when constructing a histogram?

7. The manager would like to resolve at least 90% of tickets in 25 minutes or less. If this goal isn't being met, the manager will hire another technician. Should they hire another technician? Which graph, the histogram or the stemplot, should you use to answer this question, and why?

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