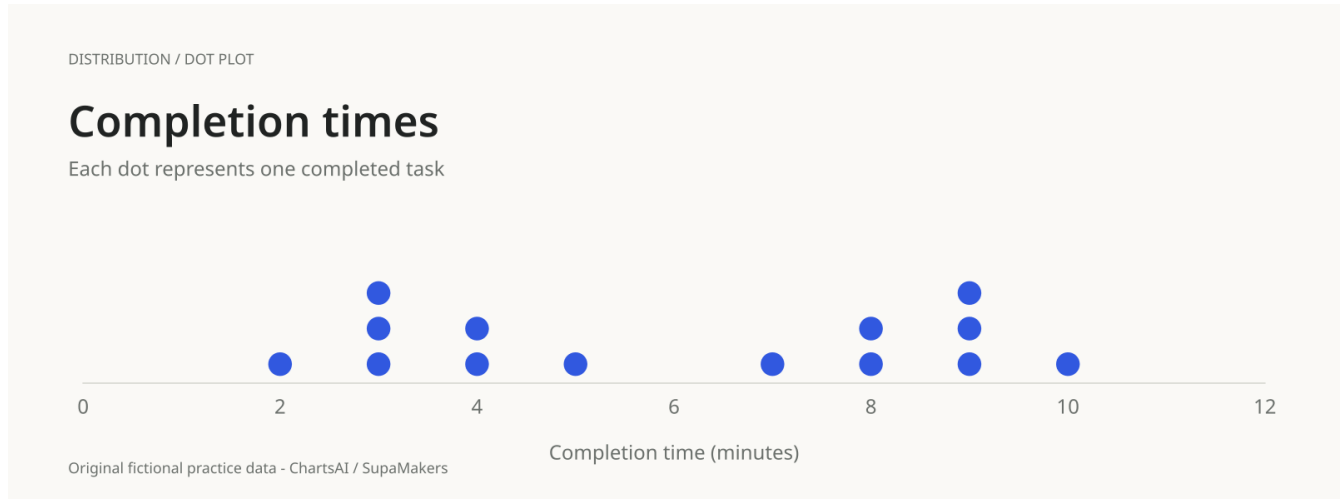


# Read a dot plot

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Count each dot once. The numbers on the horizontal axis are minutes, not frequencies.



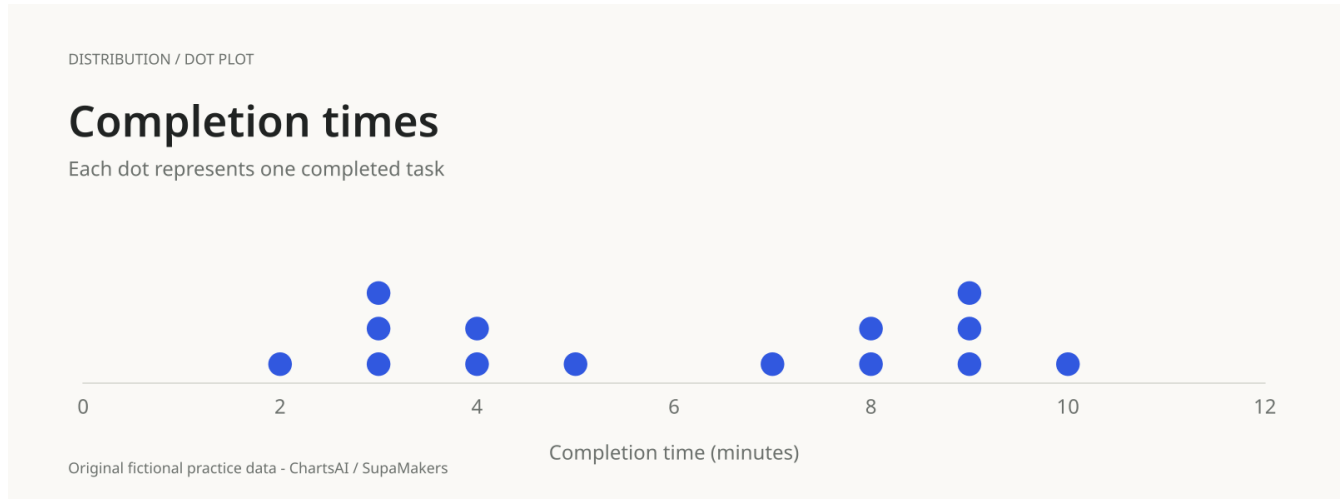
Completion time (minutes): 2, 3, 3, 3, 4, 4, 5, 7, 8, 8, 9, 9, 9, 10. Fictional data.

**1. How many completed tasks are shown? Explain how you counted.****2. Which completion times occur most often? Give each frequency.****3. What is the range? Include the unit.****4. Describe the shape. Does it prove there are two different groups of people?**

# What can an average hide?

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Use the same completion times as lesson 1. Show your calculation before interpreting it.



Completion time (minutes): 2, 3, 3, 3, 4, 4, 5, 7, 8, 8, 9, 9, 9, 10. Fictional data.

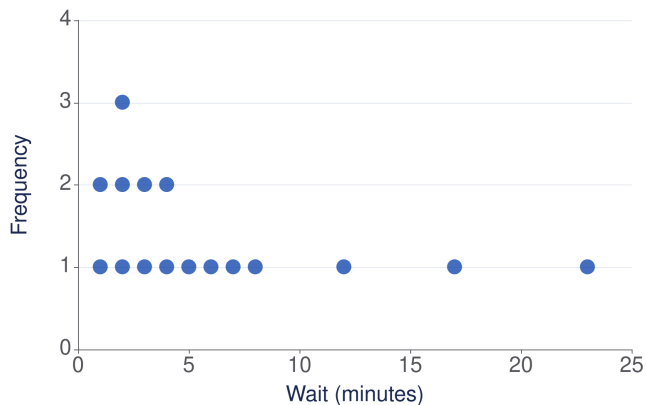
**1. Calculate the mean completion time. Show the total and divisor.****2. Calculate the median. Which two ordered positions do you use?****3. Did anyone take exactly the mean time? What does this tell you about averages?****4. Write one sentence that communicates more than the mean alone.**

# From dots to histogram bins

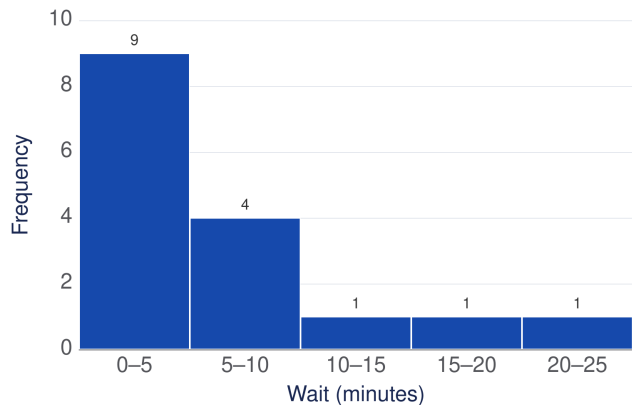
Name: \_\_\_\_\_ Date: \_\_\_\_\_

New dataset: waiting times. Both plots use all the same waits. Bins start at 0 and have width 5 minutes; include the left edge, exclude the right edge, except the last bin includes its right edge.

Individual waiting times



Waiting times grouped into intervals



Wait (minutes): 1, 1, 2, 2, 2, 3, 3, 4, 4, 5, 6, 7, 8, 12, 17, 23. Fictional data.

1. How many observations are in each chart? Did grouping add or remove any?

2. How many waits are from 0 up to (but not including) 5 minutes? How many are exactly 2 minutes?

3. Which interval contains a wait of exactly 5 minutes?

4. Could the histogram alone recover every exact wait? Explain.