



Name _____ Date _____

Scales and Intervals (pages 50–53)

When you make a frequency table, sometimes it is easier to group the data into **intervals**. The total size of the groups is the **scale** of the frequency table.

Choosing a Scale for a Frequency Table	Choose a scale that includes the least number and the greatest. <ul style="list-style-type: none"> • Choose an interval that will give you a manageable number of groups, usually from four to seven. • Make sure all the intervals, or groups, are equal and they do not overlap.
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EXAMPLES

A Name the scale and the interval in this first column of a frequency table:

Free Throws

- 16–20
- 11–15
- 6–10
- 1–5

The scale goes from 1 to 20. Each interval has 5 scores in it (for example, 16, 17, 18, 19, 20). The interval is 5.

B Here are the number of free throws made by the third period gym class: 17, 2, 10, 4, 5, 7, 7, 16, 3, 12, 9, 3, 4. Complete the frequency table started in Example A.

Add two columns to the table. Mark tallies for each interval. Then write the frequencies.

Free Throws	Tally	Frequency
16–20		2
11–15		1
6–10		4
1–5		6

Try These Together

- Choose a scale for data from 3 to 32.
HINT: Your scale must include 3 and 32.
- How many different whole number scores are possible in an interval from 25 to 30?
HINT: Write each score, 25, 26, ... and count how many, or subtract 30 – 25 and add 1.

PRACTICE

Choose the better scale for a frequency table for the set of data.

3. 8, 3, 9, 12, 20, 1 a. 0 to 20 b. 0 to 30

Choose the best interval for a frequency table for the set of data.

4. 10, 32, 64, 80, 96 a. 3 b. 10 c. 20



5. Standardized Test Practice These data show how many miles 10 sixth-graders live from school. What interval would you use in making a frequency table for this set of data?

2 mi, 4 mi, 3 mi, 2 mi, 10 mi, 12 mi, 8 mi, 7 mi, 5 mi, 11 mi

- A** 20 **B** 10 **C** 5 **D** 2

Answers: 1. Sample answer: 0–40 2. 6 3. a 4. c 5. D