Name:_____

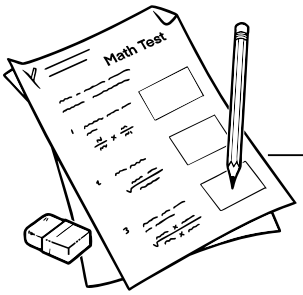
Back-to-Back Stem-and-Leaf Plots

All stem-and-leaf plots show the frequency of values in a data set, arranged to emphasize place value. Back-to-back stem-and-leaf plots, also called two-sided stem-and-leaf plots, are used to compare **two** data sets.

To make a back-to-back stem-and-leaf plot:

1. Organize each of your data sets from least to greatest.
2. Draw a 3-column T-chart and choose the stem and leaf place values.
3. Write the data sets' stems in the center column. **Do not** skip any numbers.
4. Write one data set's leaves in the right column, matched to their stems, ***in order***.
5. Write the other data set's leaves in the left column, matched to their stems, ***in order***. Note: smaller values should always be closest to the stem. For the left column, this means you must write from right to left.
6. Add one or more key, labels identifying each side, and a title.

example: Mrs. Medina (M) and Ms. Beasley (B) give the same test to their students. Student scores are recorded in the back-to-back stem-and-leaf plot below.



Student Test Scores

Mrs. M's Class		Ms. B's Class
	6	5 7
	7	
9 9 6 5 4 4 3 2 2 0	8	0 1 2 4 5 6 8
9 8 6 6 5 4 4 2 2 2	9	0 3 4 5 5 5 6 8
0 0 0 0 0	10	0

Key: 0|8 = 80 **Key:** 8|0 = 80

The plot quickly shows a difference in class sizes as well as student scores.

The 7 stem is included even though there are no values in the 70s in either data set, highlighting the gap in Ms. Beasley's class's data.

Per the keys, stems are 10s and leaves are 1s.

As with regular stem-and-leaf plots, remember:

1. Pay attention to the key to tell what place values are used. While 10s and 1s are most common, some plots show decimals or other values.
2. Account for double-digit stems that represent multiple place values.