

# Shoe Graph

**NCTM Content Standard:**

Data Analysis & Probability,  
Number & Operations

**NCTM Process Standard:**

Reasoning & Proof,  
Communication

**Specific math content  
or skill addressed:**

Graphs & diagrams, counting

**Component:**

Activity

**Materials needed:**

None

**Preparing students  
for success:**

Students should have developed enough self-control that they can do an activity with their shoes calmly and safely.

It's especially fun to do this activity after doing the Shoe Twister Greeting (see 99 *Activities and Greetings*).

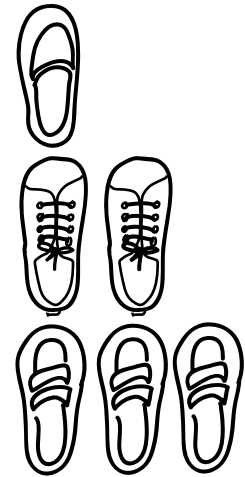
Students could just keep one shoe off and place it behind them during sharing time.

**Vocabulary:**

Sort, least, most, graph

**How to do it:**

- In the circle, ask students to take off one of their shoes and place it in front of them. Tell them everyone is going to sort the shoes in a certain way.
- Direct them to listen to the categories you call out. Possibilities include color of shoes, fastener (Velcro, ties, slip-ons), and type of shoe (sneaker, flip flop, dress shoe). Begin with a category that includes only a small number of students. For example, ask all students with pink shoes to stand and pick up their shoes.
- Direct the students in the first category to line their shoes up in a straight line in the middle of the circle. Help with this as necessary.
- Ask students in the next category (for instance, brown shoes) to stand and pick up their shoes. Direct them to place their shoes in a new line below the first. They should line up the shoes to fit in a one-to-one pattern with the first line.
- Continue the process until you have exhausted all categories.
- Ask students to look at the shoe graph and tell you *“Which kind of shoe do we have most of? Which kind of shoe do we have least of? Are there any lines that have the same or an equal amount?”*



**EXTENSIONS DURING A LATER MATH LESSON:**

- Have students work together to graph some other aspects of themselves (hair, eye color, etc.)
- Students with enough experience with graphs should create their own graphs by designing and asking classmates certain questions, then recording the results.