

Roving Ranges

Diana's mother is giving her a hard time about how many pictures she posts on Facebook. Last month Diana posted 21 pictures.

"I think that's a lot more than most kids your age," her mom says.

"No mom," says Diana, "it's totally typical."

Her mom doesn't believe her. Diana needs a project in her math class, so she decides to gather some data about how many pictures her classmates post on Facebook. She'll analyze the data—and, she hopes, convince her mother.

Here are the numbers of posted pictures of 21 students randomly chosen from her grade.

0, 10, 16, 0, 12, 28, 2, 14, 40, 8, 15, 12, 5, 18, 63, 6, 20, 54, 20, 77, 21.

1. Is Diana "typical?" Answer her question with enough detail so that she and her mother have a good idea of where she fits in the distribution. (Show your thinking with sentences and mathematical expressions.)
2. What did you do with the data to investigate?
3. Ben, Juan, and Maryam all had different numbers of pictures than Diana and they want to know whether their numbers were "typical" or "unusual." What numbers in this distribution are "typical" and what numbers are "unusual?"
4. Explain how you decided how many pictures would be "typical" or "unusual."