

1. Lucy has 8 fish. She wants to buy 5 more fish. How many fish would Lucy have then?
2. TJ has 13 chocolate chip cookies. At lunch she ate 5 of these cookies. How many cookies did TJ have left?
3. Janelle has 7 trolls in her collection. How many more does she have to buy to have 11 trolls?

These problems represent different types of addition and subtraction problems. At first glance, problem 1 seems to involve addition, and problems 2 and 3 seem to require subtraction. However, problems 1 and 3 can also be characterized as having to do with “joining” two sets, while problem 2 is about “separating” an original set into two subsets. Characterizing problems in this way suggests that subtraction may not be the only approach to solving problem 3, for example.

After the participants had a chance to solve the three problems on their own, the facilitator initiated the discussion by asking, “Which of these two problems are most alike and why?” Besides noticing that problems 2 and 3 involved subtraction, a teacher also commented that problem 3 would be harder for his/her students.