

With word problems a lot of times, it's helpful to close your eyes and visualize yourself actually doing what the word problem asks you to do. If you have to physically do it, then go for it!

**1)** If you're pushing two or more sets together that have differing amounts and counting them, it's an addition problem.

**Example:** It rained 3 inches on Monday, 1 inch on Tuesday and 2 inches on Wednesday. How much did it rain in those three days? (The sets are 3 inches, 1 inch, and 2 inches. So the problem is  $3 + 1 + 2$ )

**2)** If you're starting off with one set and taking one thing out or away from that set, then it's subtraction. The first number in the subtraction problem is the amount you start with, and the second number (after the subtraction sign) is the amount you're taking away.

**Example:** Jamie has 5 apples for a pie, but two of them turn out to be rotten. How many apples does she have that she can use for her pie? (The first amount - what she's starting with - is five apples. The second amount - what she's taking away - is 2 apples. So the problem is  $5 - 2$ )

**3)** If you are counting how many \*groups\* of something you have, then it's multiplication. The difference between addition and multiplication is that for adding, the sets can all be different sizes. For multiplication, the sets have to all be the same size. That's why we say that multiplication is a shortcut for repeated addition!

In the first example, we can't make a multiplication problem out of it because we got different amounts of rain each day. BUT, if we instead had 2 inches of rain on Monday, 2 inches on Tuesday, and 2 inches on Wednesday, we COULD use multiplication because we have 3 groups of 2 inches. The first number is the number of groups and the second number is how much is in each group. (We have 3 groups [days] of 2 inches [rain amount in each day], so the problem would be  $3 \times 2$ .)

**4)** If you're starting off with one set (like subtraction) and taking out several pieces that are all the same size, then it's division. They have to be the same size, though: again, division is a shortcut for repeated subtraction. Like subtraction, the first number is the amount you're starting with. The second number is either the size of the piece/amount you're removing OR, in another case, the number of groups you're breaking that first number into.

**Example:** A bottle of cough syrup has 150 ml of medicine. If each dose is 15 ml, how many doses are in the bottle? (The first number is 150 because it's the amount of cough syrup you're starting with in the whole bottle. The second number is 15 because that's how much is in each of the doses (the size). The answer tells us how many doses (groups of 15 ml) we can get out of the bottle. So, the problem is  $150 \div 15$ .)

**Example:** A pizza is cut into 10 pieces. How many pieces would each person in a family of 5 receive if the pizza is split evenly amongst them all? (The first number is 10 because it's the amount of pizza you're starting with. The second number is 5 because that's how many groups (people) you're splitting the pizza with. The answer tells you how many pieces are in each group. So, the problem is  $10 \div 5$ .)