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How to Add and Subtract Like Fractions and Mixed Numbers

When adding and subtracting fractions, you must be sure to have a common denominator. Once you have a common denominator, you just add or subtract your numerators and then your whole numbers. Learn how in this lesson.

Adding Like Fractions and Mixed Numbers

To add fractions you must have a common denominator. When looking at your fraction, you need to make sure that the fractions you are adding have the same denominator. Once your denominators are the same, you can simply add the numerators. You will keep the same denominator for your answer.

If your fraction contains a whole number, it would be called a **mixed number**. When adding mixed numbers, first add your numerators and then your whole numbers. Again, the denominator in your answer will stay the same.

Adding Like Fractions Example

Todd and James work on a farm collecting eggs from the hens. They both work to fill cartons that can contain up to 12 eggs each. Todd and James have a basket full of eggs that they must now put into the cartons. They both start stacking each carton with 12 eggs.

As Todd grabs the last egg, he sees that he has collected 4 full cartons and 5 eggs in the next carton. His fraction would represent 4 5/12.

James starts counting his eggs; he collected 6 full cartons and 2 eggs in the next carton. His fraction would represent 6 2/12.

The two boys now want to know how many eggs they collected together. They will need to add 4 5/12 + 6 2/12.

The two boys can see that both of their fractions have a denominator of 12. Since they have a common denominator, they can just add their numerators and then their whole numbers. The boys know that they will keep the same denominator.

So 5 + 2 is 7, and the whole numbers, 4 + 6, are 10. This makes their combined amount of eggs 10 and 7/12. The boys know that they collected 10 full cartons and 7 out of 12 eggs in the next carton.

Subtracting Like Fractions and Mixed Numbers

Same as adding fractions, to **subtract fractions** you must have a common denominator. When looking at your fraction, you need to make sure that the fractions you are subtracting have the same denominator. Once your denominators are the same, you can simply subtract the numerators. When subtracting mixed numbers, first subtract your numerators and then subtract your whole numbers.

Subtracting Fractions Example

Let's look at an example of subtracting mixed numbers. Donald works at the Apple store and things are really busy with the release of the new iPhones. Donald knows that the iPhones come in cases that hold 6 phones per case. He can see that they have 10 full cases and only 4 phones in another case. His fraction would represent 10 4/6 cases of iPhones in stock.

Throughout the day, the store was full of customers buying phones. At the end of the day, Donald learns that they sold 7 2/6 cases of iPhones. He now needs to know how many cases he has left to sell. Donald must subtract 10 4/6 - 7 2/6 to see how many cases the store has remaining.

To begin, Donald can see that he has a common denominator of 6 in both fractions. He can now subtract his numerators and then his whole numbers. 4 - 2 is 2 and the whole numbers, 10 - 7, are 3. Donald can see that his fraction is 3 2/6.

He knows that he needs to report the number in simplest form. So 2 and 6 will both divide by 2, making his fraction 3 1/3. Donald now knows that the store only has 3 1/3 cases of iPhones remaining.

Lesson Summary

So let's look back at this skill of adding and subtracting like fractions and **mixed numbers**. To add and **subtract fractions** you must have a common denominator. When looking at your fraction, you need to make sure that the fractions you are adding or subtracting have the same denominator. Once your denominators are the same, you can simply add or subtract the numerators. When you're adding and subtracting mixed numbers, first add or subtract your numerators, and then you'll add or subtract your whole numbers.