

## UNIT E6 and F1 and 2

### Helpful Hints

1. Whenever adding or subtracting fractions you must have a common denominator. (the bottom number) Sometimes this requires you to change the bottom number. **Whatever you multiply to the bottom number to change it, you must multiply by the same thing to the top number as well.**
2. Example...

Complete the equivalent fraction.

$$\frac{8 \times \square}{9 \times \square} = \frac{\square}{54}$$

You need to times the 9 by 6 to =54.  
Therefore you must multiply the 8 by 6.

Complete the equivalent fraction.

$$\frac{8 \times 6}{9 \times 6} = \frac{48}{54}$$

Below is an example of adding two fractions together.  $\frac{4}{7} + \frac{1}{4} = ?$

First step is to find a common denominator. This is the smallest number that both 4 & 7 go into. In this case it is 28.

1. Find the common denominator.

$$\frac{4 \times \square}{7 \times \square} = \frac{\square}{28}$$

2. Find the new fractions.

$$\frac{1 \times \square}{4 \times \square} = \frac{\square}{28}$$

Final step is to add the  $\frac{16}{28} + \frac{7}{28} =$

Next step is to multiply the numerator and denominator by the same number. In the example, you multiplied the numerator and the denominator both by 4.

1. Find the common denominator.

$$\frac{4 \times 4}{7 \times 4} = \frac{16}{28}$$

2. Find the new fractions.

$$\frac{1 \times 7}{4 \times 7} = \frac{7}{28}$$

### Greatest common factor

Factors are numbers that divide evenly in a number. The greatest common factor of two or more numbers is the largest number that can **divide evenly into** each of the numbers. Here, you will learn how to find factors and greatest common factors.

Example: Factors of 8 and 32

You can evenly divide 8 by 1, 2, 4 and 8.

You can evenly divide 32 by 1, 2, 4, 8, 16 and 32.

**Therefore, the largest common factor of both numbers is 8.**

This is another method to finding the greatest common factor. Let's take **8** and **32**.

The prime factors of 8 are **1 x 2 x 2 x 2**.

Notice that the prime factors of 32 are **1 x 2 x 2 x 2 x 2 x 2**.

So the common factors that we have are: **1, 2, 2, 2**.

If we [multiply](#) the common prime factors of 8 and 32, we get:

**1 x 2 x 2 x 2 = 8** which becomes the greatest common factor.