Multiply Fractions

Multiply fractions is not very hard, specially if you know your times tables well. In this lesson, we'll start with multiplying two proper fractions.

To multiply two proper fractions, multiply the numerators together and multiply denominators together to get your answer. Reduce the final fractions if possible.

Let's do the following examples to learn how to multiply two proper fractions:

Example 1: Multiply the following fractions and write your answer in simplest form if possible.

a.

$$\frac{2}{3} \times \frac{2}{5} = \frac{2 \times 2}{3 \times 5} = \frac{4}{15}$$

> That's it. Just multiply numerator to numerator and denominator to denominator. Don't forget to reduce your answering fraction if possible. In this question 4 and 15 have just 1 as their gcf, so answer is already in its lowest terms.

b.

$$\frac{2}{3} \times \frac{1}{2} = \frac{\overset{1}{\cancel{2}}}{\underset{3}{\cancel{6}}} = \frac{1}{3}$$

> Easy, isn't it? No need to find lcd, no need to make the denominators same, just multiply Num. to Num. and Denom. to Denom. Reduce your answer if possible. In this problem 2 and 6 has gcf other than 1 which is 2. So cut 2 and 6 dividing by 2 to get new Num. as 1 and new Den. as 3.

c.

$$\frac{2}{3} \times \frac{3}{10} = \frac{\overset{1}{\cancel{6}}}{\underset{5}{\cancel{30}}} = \frac{1}{5}$$

d.

$$\frac{6}{13} \times \frac{2}{3} = \frac{\overset{4}{\cancel{12}}}{\underset{13}{\cancel{39}}} = \frac{4}{13}$$

> Recall, gcf of 12 and 39 is 3, so cut both as 12÷3 = 4 and 39÷3 = 13

$$\frac{12}{25} \times \frac{15}{16} = \frac{\overset{9}{\cancel{180}}}{\underset{20}{\cancel{400}}} = \frac{9}{20}$$

> GCF for 180 and 400 is 20. So, divide (cut) both of them with 20 to get 9 as new numerator and 20 as new denominator because 180 ÷ 20 = 9 and 400 ÷ 20 = 20

e.

$$\frac{14}{17} \times \frac{11}{14} = \frac{\overset{11}{\cancel{154}}}{\underset{17}{\cancel{238}}} = \frac{11}{17}$$

> GCF of 154 and 238 is 14