ADDING FRACTIONS

- You will need some paper!

Fractions

- The top number is the numerator
- The bottom number is the denominator
- Example:2 numerator

5 denominator

A fraction can also look like this 2/5 with the 2 as the numerator and the 5 the denominator.

To add fractions with the same denominator

- Keep the common denominator and add the numerator.
- Example: 2/5 + 1/5= 3/5
- Example: 4/10 + 3/10= 7/10

- Notice that the denominator does not change, you only add the numerator!

Try some!!!

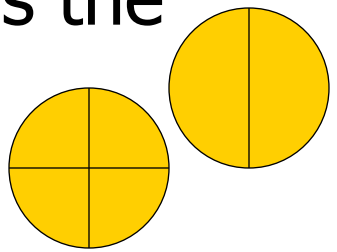
- 1.) 1/3 + 1/3 =
- 2.) 3/8 + 4/8 =
- 3.) 1/10 + 6/10 =
- 4.) 1/5 + 2/5 =
- 5.) 24/50 + 20/50 =
- 6.) 6/13 + 6/13 =
- 7.) 2/45 + 12/45 =
- 8.) 8/90 + 15/90 =

Check Your Work

- 2/3
- 7/8
- 7/10
- 3/5
- 49/50
- 12/13
- 14/45
- 23/90

Adding fractions with different denominators is a little different

- You must first change the fraction before you can add fractions.
- The fractions must have the same denominators to add them.
- For example: If you have a pie cut in two pieces and a pie cut into four pieces the pieces are not the same.



- You can not compare a 1/2 of pie to a ¼ of pie.
- You must make the pies equal by making them both 4 pieces.
- If you multiply the fraction ½ by 2 you will get 2/4
- Example: $\frac{1}{2} \times 2 = \frac{2}{4}$

  $2 \times 2 = 4$
- So, ½ is the same as 2/4

Making common denominators

- To make common denominators you must find the smallest multiple (least common multiple) of the two denominators
- Example:
  - 2/3 and 4/5 the least common multiple of 3 and 5 is 15. 15 would be the common denominator.
  - 7/8 and 1/4 the least common multiple is 8.

Lets try to find smallest common multiples

- 1.) 1/5 and 3/4 a) 5 b) 20 c) 8
- 2.) 2/7 and 4/5a) 7 b) 15 c) 35
- 3.) 1/3 and 4/6a) 6 b) 12 c) 18
- 4.) 1/2 and 4/9a) 18 b) 9 c) 3
- 5.) 3/8 and 1/2a) 2 b) 8 c) 16

How did you do?

- 1.) 1/5 and 3/4 b) 20
- 2.) 2/7 and 4/5c) 35
- 3.) 1/3 and 4/6a) 6
- 4.) 1/2 and 4/9a) 18
- 5.) 3/8 and 1/2b) 8

Changing the fractions to add

- Once you have found the common denominator, you have to change the numerator so that the fraction remains equal.
- Example:
  - 1/4 + 2/3=the common denominator is 12.
  - You must multiply the 4 by 3 to equal 12 and the 3 by 4 to equal 12. When multiplying the denominator you must also multiply the numerator by the same number to keep the fraction equal.

Some Examples

- 1/4 + 2/3 =
  - Change the fractions so that they have common denominators.
  - $\frac{1}{4} \times \frac{3}{3} = \frac{3}{12} \times \frac{4}{4} = \frac{8}{12}$
  - The two new fractions are 3/12 and 8/12

Now it's time to add!

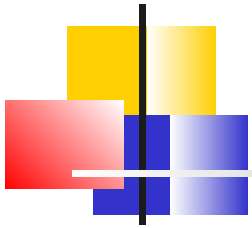
- Now that you have changed the fractions to have the same denominator, it is time to add the fractions.
- You do not add the denominators. That number stays the same. You add the numerators and keep the common denominator.
- Example: $\frac{3}{12} + \frac{8}{12} = \frac{11}{12}$

Try adding fractions

- 1.) 2/3 + 1/5
- 2.) 4/9 + 1/3
- 3.) 3/7 + 1/3
- 4.) 1/2 + 3/8
- 5.) 3/8 + 1/4

Check your answers

- 1.) 13/15
- 2.) 7/9
- 3.) 16/21
- 4.) 7/8
- 5.) 5/8



Nice Work!!!