

Name \_\_\_\_\_

## **Adding and Subtracting Fractions**

### **To find a Common Denominator**

1. Look at the fractions if they have the same denominator?  
Ok, add or subtract them.
2. If the denominators are different multiply the denominators together to make a common denominator.

$$\frac{2}{3} \times \frac{4}{4} = \frac{8}{12}$$

$$\frac{1}{4} \times \frac{3}{3} = \frac{3}{12}$$

Common Denominator

$$3 \times 4 = \boxed{12}$$

When you add or subtract fractions you **MUST** have a common denominator!!

Add or Subtract...

Stack and Rack

### **Adding Fractions**

1. Find Common Denominator if needed
2. Add the Numerators
3. Keep the Denominator
4. Add Whole Numbers
5. Simplify

### **Subtracting Fractions**

1. Find Common Denominator if needed
2. Borrow 1 from the whole number to add back to the fraction if needed
3. Subtract the Numerators
4. Keep the Denominator
5. Subtract the Whole Numbers
6. Simplify

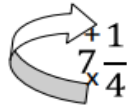
Try Some: You can show your work on the lined paper underneath if you need more space.

|                                  |                                                                                                                                                       |                                   |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 1) $3\frac{3}{8} + 3\frac{5}{6}$ | 2) $6\frac{6}{8} - 1\frac{1}{2}$                                                                                                                      | 3) $5\frac{1}{12} + 1\frac{1}{3}$ |
| 4) $1\frac{1}{3} + 2\frac{2}{3}$ | 5) Ally had $4\frac{2}{3}$ pounds of chopped walnuts. She used $1\frac{1}{4}$ pounds in recipe. How many pounds of chopped walnuts did she have left? |                                   |

## Multiplying and Dividing Fractions

### Converting Mixed Numbers to Improper Fractions

1. Draw the C
2. Multiply the denominator by the whole number
3. Add the numerator
4. Keep the same denominator



$$\frac{4 \times 7 + 1}{4} = \frac{29}{4}$$

Improper Fraction

Multiply or Divide...

Side by Side

43

When you multiply and divide fractions you **DO NOT** need a common denominator

### Converting Improper Fractions to Mixed Numbers

1. Divide the top number by the bottom number
2. Keep the original denominator
3. Remainder becomes the numerator
4. Quotient becomes the whole number

$$\frac{21}{4}$$

### Multiplying Fractions

1. Convert mixed numbers to improper fractions
2. Multiply across the top and bottom
3. Simplify

### Dividing Fractions

1. Convert mixed numbers to improper fractions
2. Keep the first fraction the **same**, **switch** the sign from division to multiplication, **flip** the second fraction
3. Multiply across the top and bottom
4. Simplify

Try Some: You can show your work on the lined paper underneath if you need more space.

|                                     |                                                                                                                                                                        |                                      |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| 6) $5\frac{1}{4} \cdot \frac{1}{6}$ | 7) $1\frac{2}{5} \div \frac{2}{3}$                                                                                                                                     | 8) $2\frac{1}{4} \cdot 1\frac{1}{5}$ |
| 9) $2\frac{1}{6} \div 1\frac{1}{6}$ | 10) In Claire's house this morning they drank $\frac{2}{6}$ gallon of milk. At Dylan's house, they drank twice as much. How much milk did they drink at Dylan's house? |                                      |