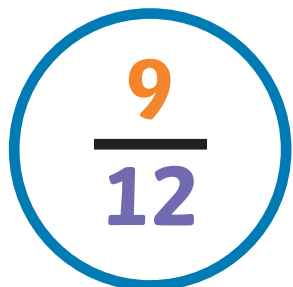


Key Vocabulary

Simplify Fractions

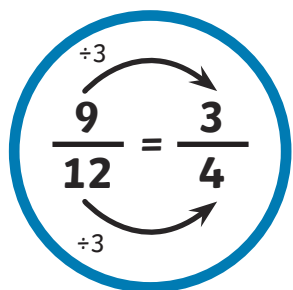
Compare and Order Fractions

| |
|-------------------------|
| numerator |
| denominator |
| proper fraction |
| improper fraction |
| factor |
| highest common multiple |
| lowest common multiple |
| equivalents |
| common numerator |
| common denominator |
| decimal equivalent |
| simplify |
| simplest form |
| mixed number |
| whole number |
| mixed number |



Factors of 9:
1, 3, 9

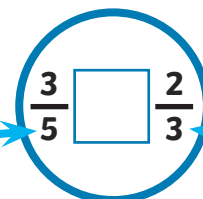
Factors of 12:
1, 2, 3, 4, 6, 12



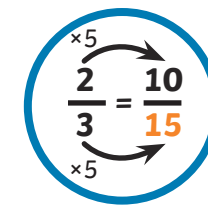
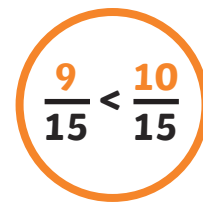
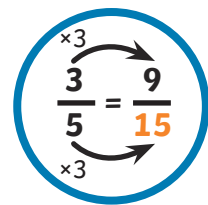
Use the Common Denominator



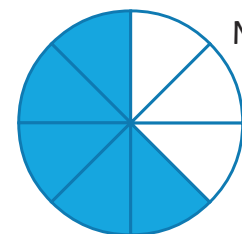
Multiples of 5:
5, 10, 15



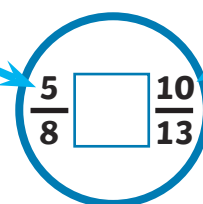
Multiples of 3:
3, 6, 9, 12, 15



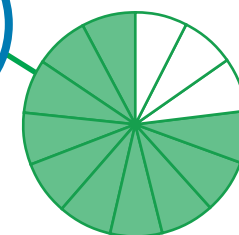
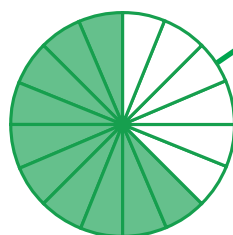
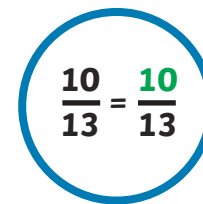
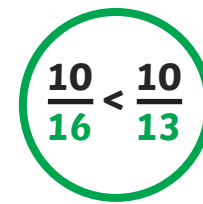
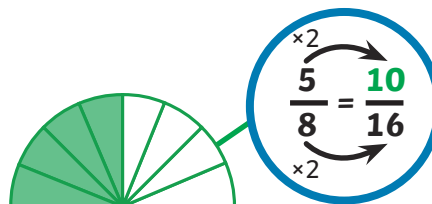
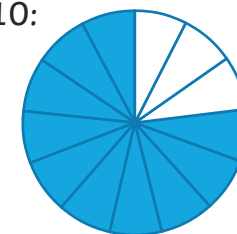
Use the Common Numerator



Multiples of 5:
5, 10, 15

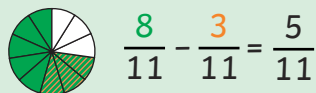
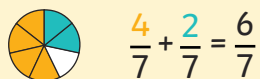


Multiples of 10:
10, 20



Adding and Subtracting Proper Fractions

Same Denominators



Different Denominators

$$\frac{2}{7} + \frac{3}{5}$$

$$\frac{9}{10} - \frac{1}{4}$$

Multiples of 7: 7, 14, 21, 28, **35**

Multiples of 10: 10, **20**

Multiples of 5: 5, 10, 15, 20, 25, 30, **35**

Multiples of 4: 4, 8, 12, 16, **20**

$$\frac{2}{7} = \frac{10}{35}, \frac{3}{5} = \frac{21}{35}$$

$$\frac{9}{10} = \frac{18}{20}, \frac{1}{4} = \frac{5}{20}$$

$$\frac{10}{35} + \frac{21}{35} = \frac{31}{35}$$

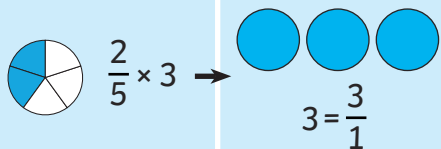
$$\frac{18}{20} - \frac{5}{20} = \frac{13}{20}$$

Multiplying Proper Fractions

Multiplying Fractions by Fractions

$$\frac{1}{2} \times \frac{1}{3} = \frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$$

Multiplying Fractions by Whole Numbers



$$\frac{2}{5} \times \frac{3}{1} = \frac{6}{5} = 1 \frac{1}{5}$$

Adding and Subtracting Mixed Numbers

Add or subtract the whole numbers and fractions separately.

$$2 \frac{2}{5} + 1 \frac{3}{10}$$

$$2 \frac{1}{2} - 1 \frac{1}{4}$$

$$2 + 1 = 3$$

$$2 - 1 = 1$$

$$\frac{2}{5} + \frac{3}{10} = \frac{4}{10} + \frac{3}{10} = \frac{7}{10}$$

$$\frac{1}{2} - \frac{1}{4} = \frac{2}{4} - \frac{1}{4} = \frac{1}{4}$$

$$3 + \frac{7}{10} = 3 \frac{7}{10}$$

$$1 + \frac{1}{4} = 1 \frac{1}{4}$$

Convert the mixed numbers to improper fractions.

$$2 \frac{2}{5} + 1 \frac{3}{10}$$

$$2 \frac{1}{2} - 1 \frac{1}{4}$$

$$2 \frac{2}{5} = \frac{12}{5}$$

$$1 \frac{3}{10} = \frac{13}{10}$$

$$2 \frac{1}{2} = \frac{5}{2}$$

$$1 \frac{1}{4} = \frac{5}{4}$$

$$\frac{12}{5} + \frac{13}{10} = \frac{24}{10} + \frac{13}{10} = \frac{37}{10}$$

$$\frac{5}{2} - \frac{5}{4} = \frac{10}{4} - \frac{5}{4} = \frac{5}{4}$$

$$\frac{37}{10} = 3 \frac{7}{10}$$

$$\frac{5}{4} = 1 \frac{1}{4}$$

Dividing Fractions by Whole Numbers

$$\frac{2}{5} \div 2 = \frac{1}{5}$$

Multiplication and division are the inverse of one another so:

$\div 2$ is the same as $\times \frac{1}{2}$

$$\frac{2}{5} \times \frac{1}{2} = \frac{2}{10}$$