

# Order of Operations

<b>B</b>	<b>Brackets</b>	$10 \times (4 + 2) = 10 \times 6 = 60$
<b>I</b>	<b>Indices</b>	$5 + 2^2 = 5 + 4 = 9$
<b>D</b>	<b>Division</b>	$10 + 6 \div 2 = 10 + 3 = 13$
<b>M</b>	<b>Multiplication</b>	$10 - 4 \times 2 = 10 - 8 = 2$
<b>A</b>	<b>Addition</b>	$10 \times 4 + 7 = 47$
<b>S</b>	<b>Subtraction</b>	$10 \div 2 - 3 = 2$



## Adding & Subtracting Fractions

**When two fractions have the Same Denominator**

If the two fractions in the calculation have the same denominator, the denominator will stay the same. Then all you need to do is simply add or subtract the numerators to find the sum of the fractions.

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

$$\frac{4}{8} - \frac{2}{8} = \frac{2}{8}$$

**When two fractions have different Denominators**

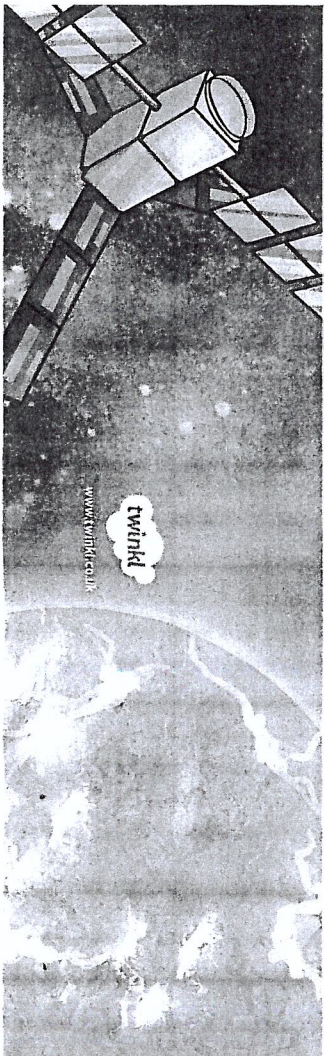
First find the smallest common denominator (smallest whole number that has both denominators as factors). Rewrite the fractions with that denominator then add or subtract. When working with mixed numbers, add or subtract the whole numbers too.

$$\frac{1}{3} + \frac{1}{2} =$$

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

$$\frac{2}{6} + \frac{3}{6} = \frac{5}{6}$$

$$\frac{5}{10} - \frac{2}{10} = \frac{3}{10}$$





# Multiplying Fractions

$$\frac{2}{4} \times \frac{3}{6}$$

$$\frac{2}{4} \times \frac{3}{6} = \frac{6}{24}$$

Multiply the numerators. Multiply the Denominators.

$$\frac{6}{24} = \frac{1}{4}$$

Simplify the fraction by dividing the numerator and denominator by their lowest common factor.



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# Dividing Fractions

$$\frac{2}{5} \div \frac{2}{3} \quad \rightarrow \quad \frac{2}{5} \times \frac{3}{2}$$

Invert the numerator and denominator to make the problem a multiplication problem.

Multiply the numerators. Multiply the Denominators.

$$\frac{2}{5} \times \frac{3}{2} = \frac{6}{10}$$

Simplify the fraction by dividing the numerator and denominator by the lowest common factor

$$\frac{6}{10} = \frac{3}{5}$$



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