

Multiplying and Dividing Algebraic Fractions

Multiplying and dividing algebraic fractions involves multiplying the **numerators** together, and multiplying the **denominators** together.

 **Example**

$$\frac{3x^3}{a} \times \frac{5x}{2b} = \frac{3x^3 \times 5x}{a \times 2b} = \frac{15x^4}{2ab}$$

Here we use the multiplication law of indices to multiply the numerators.

To **divide algebraic fractions**, we first write the **reciprocal** of the **dividing fraction** and then multiply the **numerators** and multiply the **denominators**.

 **Example**

$$\frac{4b}{3} \div \frac{7a}{b} = \frac{4b}{3} \times \frac{b}{7a} = \frac{4b \times b}{3 \times 7a} = \frac{4b^2}{21a}$$

To find the reciprocal, flip the fraction.