

Dividing a Polynomial by a Monomial

1 Simplify:

$$\frac{10x^4 + 6x^3}{2x^2} = \underline{\hspace{2cm}}$$

2 Simplify:

$$\frac{9a^5 - 3a^3}{3a} = \underline{\hspace{2cm}}$$

3 Simplify:

$$\frac{-12y^6 + 8y^4}{-4y^3} = \underline{\hspace{2cm}}$$

4 Simplify:

$$\frac{p^4q^2 + p^2q^4}{p^2q^2} = \underline{\hspace{2cm}}$$

5 Simplify:

$$\frac{18m^5 - 9m^4 + 27m^3}{9m^2} = \underline{\hspace{2cm}}$$

6 Simplify:

$$\frac{20a^3b^2 - 15a^2b^3}{5a^2b} = \underline{\hspace{2cm}}$$

7 Simplify:

$$\frac{7x^5y^3 - 7x^3y^5}{-7x^3y^3} = \underline{\hspace{2cm}}$$

8 Simplify:

$$\frac{s^6 - 4s^5 - 2s^4}{s^3} = \underline{\hspace{2cm}}$$

9 Simplify:

$$\frac{12x^3 - 8x^2 - 4x}{4x} = \underline{\hspace{2cm}}$$

10 Simplify:

$$\frac{a^4b^2c - a^3b^3c^2 + a^2b^4c^3}{a^2b^2c} = \underline{\hspace{2cm}}$$

Dividing a Polynomial by a Monomial

1 Simplify:

$$\frac{10x^4 + 6x^3}{2x^2} = \underline{\hspace{2cm}}$$

Answer $5x^2 - 3y^2$

Solution $\frac{10x^4 + 6x^3}{2x^2} = 5x^2 - 3y^2$

2 Simplify:

$$\frac{9a^5 - 3a^3}{3a} = \underline{\hspace{2cm}}$$

Answer $3a^4 - a^2$

Solution $\frac{9a^5 - 3a^3}{3a} = 3a^4 - a^2$

3 Simplify:

$$\frac{-12y^6 + 8y^4}{-4y^3} = \underline{\hspace{2cm}}$$

Answer $3y^3 - 2y$

Solution $\frac{-12y^6 + 8y^4}{-4y^3} = 3y^3 - 2y$

4 Simplify:

$$\frac{p^4q^2 + p^2q^4}{p^2q^2} = \underline{\hspace{2cm}}$$

Answer $p^2 + q^2$

Solution $\frac{p^4q^2 + p^2q^4}{p^2q^2} = p^2 + q^2$

5 Simplify:

$$\frac{18m^5 - 9m^4 + 27m^3}{9m^2} = \underline{\hspace{2cm}}$$

Answer $2m^3 - m^2 + 3m$

Solution $\frac{18m^5 - 9m^4 + 27m^3}{9m^2} = 2m^3 - m^2 + 3m$

6 Simplify:

$$\frac{20a^3b^2 - 15a^2b^3}{5a^2b} = \underline{\hspace{2cm}}$$

Answer $4ab - 3b^2$

Solution $\frac{20a^3b^2 - 15a^2b^3}{5a^2b} = 4ab - 3b^2$

7 Simplify:

$$\frac{7x^5y^3 - 7x^3y^5}{-7x^3y^3} = \underline{\hspace{2cm}}$$

Answer $-x^2 + y^2$

Solution $\frac{7x^5y^3 - 7x^3y^5}{-7x^3y^3} = -x^2 + y^2$

8 Simplify:

$$\frac{s^6 - 4s^5 - 2s^4}{s^3} = \underline{\hspace{2cm}}$$

Answer $s^3 - 4s^2 - 2s$

Solution $\frac{s^6 - 4s^5 - 2s^4}{s^3} = s^3 - 4s^2 - 2s$

9 Simplify:

$$\frac{12x^3 - 8x^2 - 4x}{4x} = \underline{\hspace{2cm}}$$

Answer $3x^2 - 2x - 1$

Solution $\frac{12x^3 - 8x^2 - 4x}{4x} = 3x^2 - 2x - 1$

10 Simplify:

$$\frac{a^4b^2c - a^3b^3c^2 + a^2b^4c^3}{a^2b^2c} = \underline{\hspace{2cm}}$$

Answer $a^2 - abc + b^2c^2$

Solution $\frac{a^4b^2c - a^3b^3c^2 + a^2b^4c^3}{a^2b^2c} = a^2 - abc + b^2c^2$