

FACTORING AND SIMPLIFYING POLYNOMIALS

Factor out the greatest common factor.

- $6x^3 + 7x^4 - 3x^2$
- $x^6 - x^3 + x^2$
- $x^3 - 5x^2 + x$
- $10x^4 - 30x^2 + 25x$
- $ab + ac + ad$
- $-4ab + 16bc + 20b$
- $12x^3 - 48x^2 + 72x$
- $2xy + 4x^2y - 6xy^3$
- $7(x-3) + 9y(x-3)$
- $x^2(y-7) - y^3(y-7)$

Factor

- $x^2(3x-5) + 4x(3x-5)$
- $3x^3(x-4) - 2x(x-4)$
- $x^3 + 3x^2 + 4x + 12$
- $2ab + a^2b - 6 - 3a$
- $x^2 + 7x + 6$
- $x^2 - 5x - 6$
- $x^2 - 4x + 3$
- $x^2 + 8x + 7$
- $x^2 + 13x + 36$
- $x^2 + 12x - 13$
- $9 + x^2 - 6x$
- $-x^3 + 4x^2 + 32x$
- $x^2 - 25$
- $x^2 - 16$
- $x^2 - 9$

Simplify

- $\frac{3x^2}{9x^3}$
- $\frac{7x^3y^2}{21x^2y^3}$
- $\frac{2x^2-4x^4}{8x^3+16x}$
- $\frac{12x^2+18x^3}{9x^4+36x}$
- $\frac{(x+2)(x-3)}{(x+3)(x+2)}$
- $\frac{3x+15}{x^2+10x+25}$
- $\frac{x^2+3x-4}{x^2-9x+8}$
- $\frac{4x^5+8x^4}{15x^7+30x^6}$
- $\frac{x^2+9-10x}{x^2+8x-9}$
- $\frac{x^3-2x^2-35x}{x^4-4x^3-21x^2}$
- $\frac{6x^2y^3-18x^6z^5}{36x^3z^7+24x^4y^6}$
- $\frac{4x+16}{4x-16}$
- $\frac{24+x^2-10x}{-18-3x+x^2}$
- $\frac{11x+28+x^2}{10x+x^2+21}$
- $\frac{x^2-64}{-x+x^2+56}$
- $\frac{16-8x+x^2}{x^2-16}$
- $\frac{x^2-x-12}{(x^2-16)(x^2-9)}$
- $\frac{x^2+6xy+9y^2}{x^2+4xy+3y^2}$
- $\frac{7x^2-49}{3x^2+4y^3}$
- $\frac{25x^2-4}{20xy-8y}$