

Section 6.1 (Factoring: Common Factor and Difference of Squares)

The objective for this section is to:

- Remove the greatest common factor in a polynomial
- Factor a binomial called the difference of squares
- Factor a polynomial that has 4 terms in it by grouping.

Factor the given expressions by taking out the greatest common factor first.

1. $5a^2 - 20ax$

2. $4p^3q - 14p^4q^2 - 16p^2q^3$

3. $4x^2y + 10xy + 5y$

Factor the given expressions; these are called difference of squares.

4. $x^2 - 25$

8. $3x^8 - 3y^8$

5. $9x^2 - 49$

6. $9x^2 + 49$

9. $(a+b)^2 - 16$

7. $81 - z^4$

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10. $64 - (p + q)^2$

Factor the given expressions by grouping the four terms.

11. $am + an + cn + cm$

12. $ac + ad + bc + bd$

13. $b^3 - b^2 + 2b - 2$

14. $a^3 - 3a^2 - 2a + 6$

15. $4p^2 - q^2 + 2p + q$