

Pre-Algebra

Unit 17 Review – Factoring Polynomial Expressions

Factoring Methods:

- 1) GCF method
- 2) AM method ($x^2 + bx + c$)
- 3) DOTS ($a^2 - b^2$)

Always factor completely by factoring out the GCF first!

Factoring Practice

Factor out the GCF.

1. $3x^3y^2 + 12x^2y$

2. $16b - 12ab$

3. $xy - 4xy^2$

Factor each polynomial into two binomials.

4. $x^2 + 8x + 15$

5. $x^2 + 6x - 7$

6. $x^2 + 12x + 27$

7. $x^2 - 10x + 21$

8. $x^2 + 2x - 3$

9. $x^2 - 9x - 36$

10. $x^2 - 25$

11. $9x^4 - 16$

12. $a^2 - 64b^2$

13. When the expressions $x^2 - 16$ and $x^2 - 2x - 8$ are factored, what is a common factor of both expressions?

14. Can the expression $x^2 + 16$ be factored? Why or why not?

Factor completely.

15. $4x^2 - 36$

16. $3x^2 + 12x + 9$

17. $8x^3 - 32x$

18. $2x^3 - 18x^2 + 28x$

18. $a^2b - 25b^3$

19. $x^3 - 6x^2 + 9x$

20. $2x^4 - 18$

21. $x^4 - 16$

22. $\pi a^2 - \pi b^2$