

Unit 3 Review
Factoring

NAME _____

Factor Using Greatest Common Factor

Factor each polynomial completely.

1. $-15x^2 + 20xy$

2. $6h^3 - 18h$

3. $8x^2 + 32x$

4. $30h^2f^7 + 55h^3f^4$

Factor Difference of Two Squares

Factor each polynomial completely.

5. $9w^2 - 16$

6. $4c^2 - 9$

7. $-2x^2 + 50$

8. $49x^2 - 100y^2$

Factor Trinomials

Factor each polynomial completely.

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

10. $10z^2 - 21z + 9$

11. $6y^2 - 7y - 20$

12. $2v^2 + 12v - 144$

Mixed Factoring Practice

Factor each polynomial completely.

13. $m^3 - 6m^2 + 8m$

14. $p^2 + 8p + 12$

15. $2x - 3y^2$

16. $2x^4 + 11x^3 + 5x^2$

Zeroes From Factors

Write the equation of the polynomial that could be formed given the following zeros and multiplicities.

17. $x = 2$ multiplicity 3, $x = -4$ multiplicity 1

18. $x = 7$ multiplicity 100, $x = 0$ multiplicity 1

Find the zeros and state the multiplicity

19. $(x + 2)(x - 3)^3$

20. $3x(2x - 5)^2(x + 3)$