

Factoring

Name: _____

1. $x^2 + 6x + 8$

2. $4y^2 - 20y + 25$

3. $a^2 - 10a + 25$

4. $x^2 - 10x + 16$

5. $-98 + 2x^2$

6. $9x^2 - 6x + 1$

7. $x^2 - 15x + 36$

8. $9x^4 - 4$

9. $m^2 + 13m - 36$

10. $25 + 4x^2$

11. $y^2 - 4y - 32$

12. $25x^2 + 10x + 1$

13. $y^2 + 3y - 18$

14. $5x^2 - 45y^2$

15. $a^2 + a - 56$

16. $n^2 - 14n + 49$

17. $81x^2 - 90x + 25$

18. $y^2 + 4y - 21$

19. $16x^4 - y^2$

20. $x^2 - 3x - 40$

21. $45 + 14y + y^2$

22. $12x^2 - 75$



Solving Equations Using Factoring

1. Rewrite equation in standard form (one member equals 0).
2. Factor completely.
3. Set each factor equal to 0; then solve.
4. Check results in original equation.

$x^2 - 7x + 12 = 0$ $(x - 4)(x - 3) = 0$ $x - 4 = 0 \text{ or } x - 3 = 0$ $x = 4 \qquad x = 3$ $x = 3, 4$	$v^3 = 10v - 3v^2$ $v^3 + 3v^2 - 10v = 0$ $v(v^2 + 3v - 10) = 0$ $v(v + 5)(v - 2) = 0$ $v = 0 \text{ or } v + 5 = 0 \text{ or } v - 2 = 0$ $v = -5 \qquad v = 2$ $v = -5, 0, 2$
--	---

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. $x^2 - 5x - 6 = 0$ 2. $v^3 - 4v = 0$ 3. $n^2 - 16n = 0$ 4. $x^2 + 9 = 10x$ 5. $6x^2 = 16x - 8$ 6. $s^2 = 56s - s^3$ 7. $3y^2 + 2y - 1 = 0$ 8. $u^3 = 14u^2 + 32u$ | <ol style="list-style-type: none"> 9. $23p = 5p^2 + 24$ 10. $x^2 - 3x - 10 = 0$ 11. $y^2 = 49$ 12. $y^2 = -7y - 10$ 13. $x^2 = 8x$ 14. $3x^2 - 2 = x^2 + 6$ 15. $4y^2 = -4y - 1$ 16. $5x^2 - 2x - 3 = 0$ |
|---|--|