

Algebra II Worksheet #2 Unit 6 selected solutions

Perform the indicated operations.

2. $(4x + 1)(3x + 4) = \underline{12x^2 + 19x + 4}$

4. $(5x - 2)(x - 7) = \underline{5x^2 - 37x + 14}$

5. $(3x + 8)(2x - 3) = \underline{6x^2 + 7x - 24}$

8. $(3x - 5)(7x + 5) = \underline{21x^2 - 20x - 25}$

Factor each of the following.

10. $15x^2 + 26x + 8 = \underline{(5x + 2)(3x + 4)}$

12. $6x^2 - 25x + 25 = \underline{(3x - 5)(2x - 5)}$

13. $6x^2 - 11x - 10 = \underline{(3x + 2)(2x - 5)}$

16. $9x^2 + 13x - 10 = \underline{(9x - 5)(x + 2)}$

Use the factoring method to solve each of the following equations.

19. $14x^2 - 41x + 15 = 0$

22. $20x^2 - 3x - 35 = 0$

25. $12x^2 + x - 6 = 0$

$(2x - 5)(7x - 3) = 0$

$(5x - 7)(4x + 5) = 0$

$(4x + 3)(3x - 2) = 0$

$2x - 5 = 0$ or $7x - 3 = 0$

$5x - 7 = 0$ or $4x + 5 = 0$

$4x + 3 = 0$ or $3x - 2 = 0$

$x = 5/2$ or $x = 3/7$

$x = 7/5$ or $x = -5/4$

$x = -3/4$ or $x = 2/3$

28. $x^2 + (x + 2)^2 = (x + 4)^2$

31. $6x^2 - 5 = 7x - 2$

$x^2 + x^2 + 4x + 4 = x^2 + 8x + 16$

$6x^2 - 7x - 3 = 0$

$x^2 - 4x - 12 = 0$

$(3x + 1)(2x - 3) = 0$

$(x - 6)(x + 2) = 0$

$3x + 1 = 0$ or $2x - 3 = 0$

$x - 6 = 0$ or $x + 2 = 0$

$x = -1/3$ or $x = 3/2$

$x = 6$ or $x = -2$