

$$x^2 - 6x + 8 = (x - 4)(x - 2)$$

Exercises

Factor each trinomial.

$$1. x^2 + 4x + 3 \\ (x + 3)(x + 1)$$

$$4. x^2 - x - 6 \\ (x - 3)(x + 2)$$

$$7. c^2 - 4c - 12 \\ (c + 2)(c - 6)$$

$$10. x^2 + 6x + 5 \\ (x + 5)(x + 1)$$

$$13. x^2 - 2x - 3 \\ (x - 3)(x + 1)$$

$$16. x^2 + 12x + 20 \\ (x + 10)(x + 2)$$

$$19. x^2 + 2xy + y^2 \\ (x + y)(x + y)$$

$$2. m^2 + 12m + 32 \\ (m + 4)(m + 8)$$

$$5. x^2 - 4x - 21 \\ (x - 7)(x + 3)$$

$$8. p^2 - 16p + 64 \\ (p - 8)(p - 8)$$

$$11. a^2 + 8a - 9 \\ (a - 1)(a + 9)$$

$$14. y^2 + 14y + 13 \\ (y + 1)(y + 13)$$

$$17. a^2 - 14a + 24 \\ (a - 2)(a - 12)$$

$$20. a^2 - 4ab + 4b^2 \\ (a - 2b)(a - 2b)$$

$$3. r^2 - 3r + 2 \\ (r - 2)(r - 1)$$

$$6. x^2 - 22x + 121 \\ (x - 11)(x - 11)$$

$$9. 9 - 10x + x^2 \\ (9 - x)(1 - x)$$

$$12. y^2 - 7y - 8 \\ (y - 8)(y + 1)$$

$$15. m^2 + 9m + 20 \\ (m + 4)(m + 5)$$

$$18. 18 + 11y + y^2 \\ (9 + y)(2 + y)$$

$$21. x^2 + 6xy - 7y^2 \\ (x + 7y)(x - y)$$

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Glencoe Algebra 1



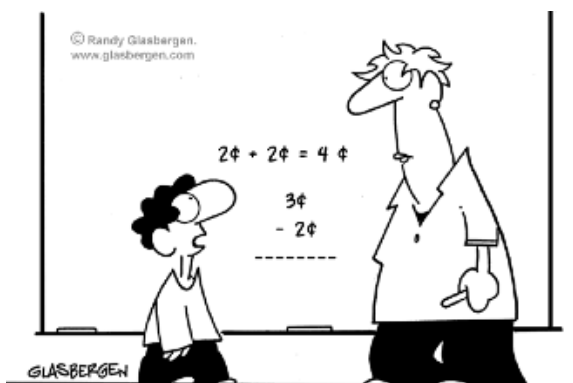
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"NO OFFENSE, MISS MYERS, BUT THIS
'ALGEBRA' IDEA OF YOURS IS
NEVER GOING TO CATCH ON!"

Exercises

Factor each trinomial, if possible. If the trinomial cannot be factored using integers, write *prime*.

- | | | |
|--|---|--|
| 1. $2x^2 - 3x - 2$
$(2x + 1)(x - 2)$ | 2. $3m^2 - 8m - 3$
$(3m + 1)(m - 3)$ | 3. $16r^2 - 8r + 1$
$(4r - 1)(4r - 1)$ |
| 4. $6x^2 + 5x - 6$
$(2x + 3)(3x - 2)$ | 5. $3x^2 + 2x - 8$
$(3x - 4)(x + 2)$ | 6. $18x^2 - 27x - 5$
$(3x - 5)(6x + 1)$ |
| 7. $2a^2 + 5a + 3$
$(2a + 3)(a + 1)$ | 8. $18y^2 + 9y - 5$
$(6y + 5)(3y - 1)$ | 9. $-4c^2 + 19c - 21$
$(4c - 7)(3 - c)$ |
| 10. $8x^2 - 4x - 24$
$(4x - 8)(2x + 3)$ | 11. $28p^2 + 60p - 25$
$(2p + 5)(14p - 5)$ | 12. $48x^2 + 22x - 15$
$(6x + 5)(8x - 3)$ |
| 13. $3y^2 - 6y - 24$
$3(y + 2)(y - 4)$ | 14. $4x^2 + 26x - 48$
$2(x + 8)(2x - 3)$ | 15. $8m^2 - 44m + 48$
$4(2m - 3)(m - 4)$ |
| 16. $6x^2 - 7x + 18$
prime | 17. $2a^2 - 14a + 18$
$2(a^2 - 7a + 9)$ | 18. $18 + 11y + 2y^2$
prime |



"Considering my generation's share of the national debt, maybe we should use some bigger numbers."

9-4 Skills Practice

Factoring Trinomials: $ax^2 + bx + c$

Factor each trinomial, if possible. If the trinomial cannot be factored using integers, write *prime*.

1. $2x^2 + 5x + 2$

$(x + 2)(2x + 1)$

2. $3n^2 + 5n + 2$

$(3n + 2)(n + 1)$

3. $2s^2 + 9s - 5$

$(s + 5)(2s - 1)$

4. $3g^2 - 7g + 2$

$(3g - 1)(g - 2)$

5. $2t^2 - 11t + 15$

$(t - 3)(2t - 5)$

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

prime

7. $2y^2 + y - 1$

$(y + 1)(2y - 1)$

8. $4h^2 + 8h - 5$

$(2h + 5)(2h - 1)$

9. $4x^2 - 3x - 3$

prime

10. $4b^2 + 15b - 4$

$(4b - 1)(b + 4)$

11. $9p^2 + 6p - 8$

$(3p - 2)(3p + 4)$

12. $6q^2 - 13q + 6$

$(3q - 2)(2q - 3)$

13. $3a^2 + 30a + 63$

$3(a + 7)(a + 3)$

14. $10w^2 - 19w - 15$

$(2w - 5)(5w + 3)$

CALVIN AND HOBBS By Bill Watterson

