

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

- |                         |                                |                                |
|-------------------------|--------------------------------|--------------------------------|
| 21. $y^2 + 12y + 27$    | 22. $a^2 + 22a + 21$           | 23. $c^2 + 2c - 3$             |
| 24. $x^2 + 2x - 15$     | 25. $y^2 - 8y + 15$            | 26. $a^2 - 12a + 35$           |
| 27. $m^2 - m - 20$      | 28. $x^2 - 5x - 24$            | 29. $h^2 + 5h + 8$             |
| 30. $c^2 + 3c + 6$      | 31. $z^2 - 10z - 39$           | 32. $y^2 - 7y + 60$            |
| 33. $r^2 - 10r - 24$    | 34. $y^2 - 9y - 36$            | 35. $y^2 + 8y - 20$            |
| 36. $n^2 + 12n - 45$    | 37. $p^2 + 10p + 25$           | 38. $g^2 + 15g + 26$           |
| 39. $b^2 - 11b + 28$    | 40. $x^2 - 9x + 14$            | 41. $15 + 16m + m^2$           |
| 42. $36 + 15a + a^2$    | 43. $y^2 + 11y + 28$           | 44. $x^2 + 14x + 33$           |
| 45. $a^2 - 18a - 40$    | 46. $b^2 + 13b - 30$           | 47. $x^2 - 3x - 18$            |
| 48. $y^2 - 7y - 30$     | 49. $36 - 16m + m^2$           | 50. $36 - 13y + y^2$           |
| 51. $m^2 - 6m - 55$     | 52. $h^2 - 3h - 108$           | 53. $66 - 17j + j^2$           |
| 54. $64 - 16c + c^2$    | 55. $42 - 23a + a^2$           | 56. $50 - 27x + x^2$           |
| 57. $c^2 - 2cd - 8d^2$  | 58. $x^2 - 4xy - 5y^2$         | 59. $a^2 + 2ab - 3b^2$         |
| 60. $n^2 + 4an - 32a^2$ | 61. $(a + b)^2 - 5(a + b) - 6$ | 62. $(c + q)^2 - 8(c + q) - 9$ |

### Written Exercises

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

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|----------------------------|-----------------------------------|------------------------------------|
| 17. $3y^2 + 8y + 5$        | 16. $7a^2 + 22a + 3$              | 17. $3x^2 + 8x + 4$                |
| 18. $3a^2 + 14a + 15$      | 19. $8m^2 - 10m + 3$              | 20. $2y^2 - 7y + 3$                |
| 21. $2h^2 - h - 3$         | 22. $3y^2 + 5y - 2$               | 23. $3k^2 + 7k - 6$                |
| 24. $3m^2 - 7m - 6$        | 25. $6p^2 - p - 2$                | 26. $4b^2 + 5b - 6$                |
| 27. $2a^2 + 3a - 14$       | 28. $2x^2 + 5x - 12$              | 29. $6t^2 + 5t - 6$                |
| 30. $7n^2 - 22n + 3$       | 31. $2y^2 - 5y + 3$               | 32. $3x^2 + 4x - 15$               |
| 33. $2q^2 - 9q - 18$       | 34. $6y^2 - 11y + 4$              | 35. $6m^2 + 19m + 10$              |
| 36. $4y^2 - 17y - 15$      | 37. $6x^2 - 19x - 11$             | 38. $10n^2 - 19n + 7$              |
| 39. $12r^2 - 11r + 3$      | 40. $9k^2 - 12k + 4$              | 41. $8p^2 - 18p + 9$               |
| 42. $5b^2 - 13b - 10$      | 43. $15p^2 + 14p - 8$             | 44. $3t^2 - 32t + 20$              |
| 45. $6y^2 - 19y + 15$      | 46. $10k^2 - 11k - 6$             | 47. $6s^2 + 7s - 20$               |
| 48. $12b^2 + 17b + 6$      | 49. $18x^2 + 55x + 25$            | 50. $16m^2 + 14m - 15$             |
| 51. $18c^2 + 41c - 10$     | 52. $15y^2 + 17y - 18$            | 53. $18r^2 - 19r - 12$             |
| 54. $15x^2 - 13xy + 2y^2$  | 55. $8m^2 - 14mn + 3n^2$          | 56. $3s^2 - 10st - 8t^2$           |
| 57. $16x^2 - 16xy - 5y^2$  | 58. $16a^2 - 38ab - 5b^2$         | 59. $20p^2 + 11pq - 4q^2$          |
| 60. $25r^2 + 25rs + 6s^2$  | 61. $9h^2 + 30km + 25m^2$         | 62. $36a^2 + 9ab - 10b^2$          |
| 63. $20s^2 + 17st - 24t^2$ | 64. $3x^2 - 30xy + 56y^2$         | 65. $8x^2 - 42xq + 27q^2$          |
| 66. $12r^2 - 16rs - 11s^2$ | 67. $14c^2 + 41cd + 15d^2$        | 68. $21x^2 + 52xy + 32y^2$         |
| 69. $30a^2 + 47a - 88$     | 70. $99a^2 + 23a - 42$            | 71. $24y^2 + 23y + 6$              |
| 72. $6 + 29b + 35b^2$      | 73. $2 - 21y + 27y^2$             | 74. $100 - 100x + 21x^2$           |
| 75. $48a^2 - 26ab + 3b^2$  | 76. $24x^2 - 61xy + 35y^2$        | 77. $10a^2 - 34ab + 27b^2$         |
| 78. $6a^3 + 13a^2 + 5a$    | 79. $40x^4 - 116x^3 + 84x^2$      | 80. $16y^3 + 4y^2 - 6y$            |
| 81. $60t^3 - 65t^2 - 70t$  | 82. $12m^3n - 22m^2n^2 - 144mn^3$ | 83. $20a^4b - 59a^3b^2 + 42a^2b^3$ |