

## SQUARING BINOMIALS

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|--------------------|---------------------|---------------------------------------|--|
| 1. $(A + 4)^2$     | 29. $(g + 20)^2$    | 57. $(-30 + 2K)^2$                    | 82. $\left(\frac{2k}{3} - 1\right)^2$          |
| 2. $(B - 4)^2$     | 30. $(h - 20)^2$    | 58. $(-30 - 2L)^2$                    | 83. $\left(\frac{2m}{3} - 3\right)^2$          |
| 3. $(2C + 3)^2$    | 31. $(i - 8)^2$     | 59. $(M + \frac{1}{2})^2$             | 84. $\left(\frac{2n}{3} + 3\right)^2$          |
| 4. $(2D - 3)^2$    | 32. $(j + 8)^2$     | 60. $(N - \frac{1}{2})^2$             | 85. $(\frac{2}{3}p + 1)^2$                     |
| 5. $(2E - 1)^2$    | 33. $(k^2 + 1)^2$   | 61. $(2P - \frac{1}{2})^2$            | 86. $(\frac{2}{3}q - 1)^2$                     |
| 6. $(2F + 1)^2$    | 34. $(K^2 - 1)^2$   | 62. $(2Q + \frac{1}{2})^2$            | 87. $(\frac{4}{5}r - 10)^2$                    |
| 7. $(G + 1)^2$     | 35. $(m^2 - m)^2$   | 63. $(3R + \frac{1}{2})^2$            | 88. $(\frac{4}{5}s + 10)^2$                    |
| 8. $(H - 1)^2$     | 36. $(n^2 + n)^2$   | 64. $(3S - \frac{1}{2})^2$            | 89. $\left(\frac{2}{5t} + 1\right)^2$          |
| 9. $(I - 2)^2$     | 37. $(2p^2 + 3)^2$  | 65. $(4T + \frac{1}{2})^2$            | 90. $\left(\frac{5u}{2w} - 1\right)^2$         |
| 10. $(J + 2)^2$    | 38. $(2q^2 - 3)^2$  | 66. $(4U - \frac{1}{2})^2$            | 91. $\left(\frac{5}{2}tu - 1\right)^2$         |
| 11. $(K + L)^2$    | 39. $(2r^2 + 3R)^2$ | 67. $(\frac{1}{2}V - 5)^2$            | 92. $\left(\frac{v}{2} - \frac{1}{3}\right)^2$ |
| 12. $(M - N)^2$    | 40. $(2t^2 - 3T)^2$ | 68. $(\frac{1}{2}W + 5)^2$            | 93. $\left(\frac{w}{2} + \frac{1}{3}\right)^2$ |
| 13. $(3P - 2Q)^2$  | 41. $(-u + 5)^2$    | 69. $(X + \frac{1}{4})^2$             | 94. $\left(\frac{x}{5} - \frac{2}{3}\right)^2$ |
| 14. $(3R + 2S)^2$  | 42. $(-v - 5)^2$    | 70. $(Y - \frac{1}{4})^2$             | 95. $\left(\frac{y}{5} + \frac{2}{3}\right)^2$ |
| 15. $(10 + T)^2$   | 43. $(-2w - 1)^2$   | 71. $(2Z - 3)^2$                      | 96. $\left(z^2 + \frac{1}{z}\right)^2$         |
| 16. $(9 - U)^2$    | 44. $(-2x + 1)^2$   | 72. $(2a + 3)^2$                      | 97. $\left(A^2 - \frac{1}{A}\right)^2$         |
| 17. $(3 + 10V)^2$  | 45. $(-2y + 3)^2$   | 73. $(3b + 3)^2$                      | 98. $\left(B - \frac{1}{B^2}\right)^2$         |
| 18. $(3 - 10W)^2$  | 46. $(-2z - 3)^2$   | 74. $(3c - 3)^2$                      | 99. $\left(C + \frac{1}{C^2}\right)^2$         |
| 19. $(4 - 5X)^2$   | 47. $(2A + 30)^2$   | 75. $(4d - 3)^2$                      | 100. $(2B^3 + 3)^2$                            |
| 20. $(4 + 5Y)^2$   | 48. $(2B - 30)^2$   | 76. $(4e + 3)^2$                      |  |
| 21. $(7Z + 2)^2$   | 49. $(30C + 2)^2$   | 77. $\left(f + \frac{1}{f}\right)^2$  |  |
| 22. $(7A - 2a)^2$  | 50. $(30D - 2)^2$   | 78. $\left(g + \frac{1}{g}\right)^2$  |  |
| 23. $(3B + 4b)^2$  | 51. $(30 + 2E)^2$   | 79. $\left(2h - \frac{1}{h}\right)^2$ |  |
| 24. $(3c - 4C)^2$  | 52. $(30 - 2F)^2$   | 80. $\left(2i + \frac{1}{i}\right)^2$ |  |
| 25. $(2dD - 6)^2$  | 53. $(2 - 30G)^2$   | 81. $\left(\frac{2j}{3} + 1\right)^2$ |  |
| 26. $(6dD + 2)^2$  | 54. $(2 + 30H)^2$   |                                       |  |
| 27. $(8eF + ef)^2$ | 55. $(-2 + 30I)^2$  |                                       |  |
| 28. $(8EF - eF)^2$ | 56. $(-2 - 30J)^2$  |                                       |  |

## Answers

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|-----------------------------------|----------------------------|---|--|
| 1. $A^2 + 8A + 16$                | 29. $g^2 + 40g + 400$      | 57. $900 - 120K + 4K^2$                 | 81. $\frac{4j^2}{9} + \frac{4j}{3} + 1$            |
| 2. $B^2 - 8B + 16$                | 30. $h^2 - 40h + 400$      | 58. $900 + 120L + 4L^2$                 | 82. $\frac{4k^2}{9} - \frac{4k}{3} + 1$            |
| 3. $4C^2 + 12C + 9$               | 31. $i^2 - 16i + 64$       | 59. $M^2 + M + \frac{1}{4}$             | 83. $\frac{4m^2}{9} - 4m + 9$                      |
| 4. $4D^2 - 12D + 9$               | 32. $j^2 + 16j + 64$       | 60. $N^2 - N + \frac{1}{4}$             | 84. $\frac{4n^2}{9} + 4n + 9$                      |
| 5. $4E^2 - 4E + 1$                | 33. $k^4 + 2k^2 + 1$       | 61. $4P^2 - 2P + \frac{1}{4}$           | 85. $\frac{4}{9}p^2 + \frac{4}{3}p + 1$            |
| 6. $4F^2 + 4F + 1$                | 34. $K^4 - 2K^2 + 1$       | 62. $4Q^2 + 2Q + \frac{1}{4}$           | 86. $\frac{4}{9}q^2 - \frac{4}{3}q + 1$            |
| 7. $G^2 + 2G + 1$                 | 35. $m^4 - 2m^3 + m^2$     | 63. $9R^2 + 3R + \frac{1}{4}$           | 87. $\frac{16}{25}r^2 - 16r + 100$                 |
| 8. $H^2 - 2H + 1$                 | 36. $n^4 + 2n^3 + n^2$     | 64. $9S^2 - 3S + \frac{1}{4}$           | 88. $\frac{16}{25}s^2 + 16s + 100$                 |
| 9. $I^2 - 4I + 4$                 | 37. $4p^4 + 6p^2 + 1$      | 65. $16T^2 + 4T + \frac{1}{4}$          | 89. $\frac{4}{25t^2} + \frac{4}{5t} + 1$           |
| 10. $J^2 + 4J + 4$                | 38. $4q^4 - 12q^2 + 9$     | 66. $16U^2 - 4U + \frac{1}{4}$          | 90. $\frac{25u^2}{4w^2} - \frac{5u}{w} + 1$        |
| 11. $K^2 + 2KL + L^2$             | 39. $4r^2 + 12rR^2 + 9R^2$ | 67. $\frac{1}{4}V^2 - 5V + 25$          | 91. $\frac{25}{4}t^2u^2 - 5tu + 1$                 |
| 12. $M^2 - 2MN + N^2$             | 40. $4t^4 - 12t^2T + 9T^2$ | 68. $\frac{1}{4}W^2 + 5W + 25$          | 92. $\frac{v^2}{4} - \frac{v}{3} + \frac{1}{9}$    |
| 13. $9P^2 - 12PQ + 4Q^2$          | 41. $u^2 - 10u + 25$       | 69. $X^2 + \frac{1}{2}X + \frac{1}{16}$ | 93. $\frac{w^2}{4} + \frac{w}{3} + \frac{1}{9}$    |
| 14. $9R^2 + 12RS + 4S^2$          | 42. $v^2 + 10v + 25$       | 70. $Y^2 - \frac{1}{2}Y + \frac{1}{16}$ | 94. $\frac{x^2}{25} - \frac{4x}{15} + \frac{4}{9}$ |
| 15. $100 + 20T + T^2$             | 43. $4w^2 + 4w + 1$        | 71. $4Z^2 - 12Z + 9$                    | 95. $\frac{y^2}{25} + \frac{4y}{15} + \frac{4}{9}$ |
| 16. $81 - 18U + U^2$              | 44. $4x^2 - 4x + 1$        | 72. $4a^2 + 12a + 9$                    | 96. $z^4 + 2z + \frac{1}{z^2}$                     |
| 17. $9 + 60V + 100V^2$            | 45. $4y^2 - 12y + 9$       | 73. $9b^2 + 18b + 9$                    | 97. $A^4 - 2A + \frac{1}{A^2}$                     |
| 18. $9 - 60W + 100W^2$            | 46. $4z^2 + 12z + 9$       | 74. $9c^2 - 18c + 9$                    | 98. $B^2 - \frac{2}{B} + \frac{1}{B^4}$            |
| 19. $16 - 40X + 25X^2$            | 47. $4A^2 + 120A + 900$    | 75. $16d^2 - 24d + 9$                   | 99. $C^2 + \frac{2}{C} + \frac{1}{C^4}$            |
| 20. $16 + 40Y + 25Y^2$            | 48. $4B^2 - 120B + 900$    | 76. $16e^2 + 24e + 9$                   | 100. $4B^6 + 12B^3 + 9$                            |
| 21. $49Z^2 + 28Z + 4$             | 49. $900C^2 + 120C + 4$    | 77. $f^2 + 2 + \frac{1}{f^2}$           |  |
| 22. $49A^2 - 28Aa + 4a^2$         | 50. $900D^2 - 120D + 4$    | 78. $g^2 + 2 + \frac{1}{g^2}$           |  |
| 23. $9B^2 + 24Bb + 4b^2$          | 51. $900 + 120E + 4E^2$    | 79. $4h^2 - 4 + \frac{1}{h^2}$          |  |
| 24. $9c^2 - 12cC + 16C^2$         | 52. $900 - 120F + 4F^2$    | 80. $4i^2 + 4 + \frac{1}{i^2}$          |  |
| 25. $4d^2D^2 - 24dD + 36$         | 53. $4 - 120G + 900G^2$    |   |  |
| 26. $36d^2D^2 + 24dD + 1$         | 54. $4 + 120H + 900H^2$    |   |  |
| 27. $64e^2F^2 + 16e^2Ff + e^2f^2$ | 55. $4 - 120I + 900I^2$    |   |  |
| 28. $64E^2F^2 - 16EeF^2 + e^2F^2$ | 56. $4 + 120J + 900J^2$    |   |  |