

Intermediate Algebra Skill

Expanding Binomials

Perform the indicated exponentiation.

1. $(x+2)^3$

2. $(x-1)^3$

3. $(y+1)^4$

4. $(y-2)^4$

5. $(a+2)^5$

6. $(a-1)^5$

7. $(w+2)^6$

8. $(w-1)^6$

9. $(n-2)^7$

10. $(n+1)^7$

11. $(4+y)^4$

12. $(2-t)^5$

13. $(5+n)^3$

14. $(3-m)^4$

15. $(2x+y)^5$

16. $(3a-b)^6$

17. $(2c+3m)^4$

18. $(3w-4b)^3$

19. $(2v+5b)^4$

20. $(4k-3h)^6$

Answers to Expanding Binomials

1. $x^3 + 6x^2 + 12x + 8$
2. $x^3 - 3x^2 + 3x - 1$
3. $y^4 + 4y^3 + 6y^2 + 4y + 1$
4. $y^4 - 8y^3 + 24y^2 - 32y + 16$
5. $a^5 + 10a^4 + 40a^3 + 80a^2 + 80a + 32$
6. $a^5 - 5a^4 + 10a^3 - 10a^2 + 5a - 1$
7. $w^6 + 12w^5 + 60w^4 + 160w^3 + 240w^2 + 192w + 64$
8. $w^6 - 6w^5 + 15w^4 - 20w^3 + 15w^2 - 6w + 1$
9. $n^7 - 14n^6 + 84n^5 - 280n^4 + 560n^3 - 672n^2 + 448n - 128$
10. $n^7 + 7n^6 + 21n^5 + 35n^4 + 35n^3 + 21n^2 + 7n + 1$
11. $256 + 256y + 96y^2 + 16y^3 + y^4$
12. $32 - 80t + 80t^2 - 40t^3 + 10t^4 - t^5$
13. $125 + 75n + 15n^2 + n^3$
14. $81 - 108m + 54m^2 - 12m^3 + m^4$
15. $32x^5 + 80x^4y + 80x^3y^2 + 40x^2y^3 + 10xy^4 + y^5$
16. $729a^6 - 1458a^5b + 1215a^4b^2 - 540a^3b^3 + 135a^2b^4 - 18ab^5 + b^6$
17. $16c^4 + 96c^3m + 216c^2m^2 + 216cm^3 + 81m^4$
18. $27w^3 - 108w^2b + 144wb^2 - 64b^3$
19. $16v^4 + 160v^3b + 600v^2b^2 + 1000vb^3 + 625b^4$
20. $4096k^6 - 18432k^5h + 34560k^4h^2 - 34560k^3h^3 + 19440k^2h^4 - 5832kh^5 + 729h^6$