

Multiplying Powers with the Same Base Assignment

Simplify the following expressions.

1. $z^2 \times z^9$

2. $4^2 \times 4$

3. $2^3 \times 2^0 \times 2^{-1}$

4. $x^5 \times x^3 \times x^{-2}$

5. $x^2y \times x^2y^3$

6. $a^5b^3 \times a^{-2}b^3$

7. $5^2x^3 \times 5x^2$

8. $2b^3 \times 2^3b^4$

9. $2ab^2 \times 2a^2b$

10. $3x^2y \times 3xy^2$

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Evaluate the following using properties of powers.

11. $(2x^2)(3x^3)$

12. $(3ab)(5ab)$

13. $(5a^2b^3c)(6ab^2c^7)$

14. $(3x^2)(5xy^3)$

15. $(2z)(4xz^2)(3x^3)$

16. $(5gh^3)(2g^2h^5)(3g^3h)$

17. $(2a^2b)(6ab^{-3})(5a^{-2}b)$

18. $(3g)(12^{-1}g^3)(2g^{-1})$

19. $(3a^2b^0)(21^0ab^3)(12^{-1}a^{-4})$

20. $(x^2y^{-3}z)(3xyz^{-2})(4xy^2z^3)$