

Name _____

EXPONENT RULES^{Revisited}



Simplify the following expressions using exponent rules.

1. $5^3 \cdot 5^7$

2. $x^8 \cdot x \cdot x^0$

3. $7^5 \cdot 7^{10}$

4. $(2^4)^3$

5. $(-3^4)^2$

6. $-2^3 \cdot 2^3 \cdot 2^3 \cdot 2^3$

7. $\frac{2^{10}}{2^4}$

8. $\frac{4^7}{4^{10}}$

9. $\frac{(2^3)^4}{(2^2)^3}$

10. $3^3 \cdot 4^3$

11. $4^3 \cdot 6^3$

12. $x^3 \cdot x^3$

13. $(x^5)^6$

14. $-(2^2)^4$

15. $(3^4)^2 \cdot 3 \cdot 3^2$

16. $\frac{6^{15}}{6^8}$

17. $\frac{(x^3)^6}{(x^4)^4}$

18. $\frac{9x^3y^6}{3x^4y^9}$

19. $\frac{25x^4y^2z^6}{15xy^3z^9}$

20. $\frac{(-3)^5}{(-3)^8}$

21. $4t^3t^{-5}$