

Algebra

Name: _____

Properties of Exponents

Period: _____ Date: _____

Simplify each of the following completely.

1. $(10ab)^0$

2. $10ab^0$

3. $5x^{-3}$

4. $(5x)^{-3}$

5. $a^6 \cdot a^{10}$

6. $y^{-5} \cdot y^2 \cdot y$

7. $(x^5)^6$

8. $(2^2)^{-2}$

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9. $(5x^2y^3)^3$

10. $(2a^{-4}b^3c^2)^{-2}$

11. $\frac{x^4}{x^2}$

12. $\frac{a^5b^8c^4}{a^2b^7c^2}$

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13. $\left(\frac{x^4}{y^2}\right)^5$

14. $\left(\frac{5a^2b^3}{c^2}\right)^3$

15. $\frac{2w^2x^{-3}y^{-8}z^0}{5a^{-4}b^{-2}c^5d^2}$

16. $\frac{a^4b^2c^{10}}{a^6b^4c^{12}}$

17. $(-5ab)(2a^2b^2)(10a^{-1}b)$

18. $(3a^2b)^{-2}(2a^4b^2)^2$

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19. $\left(\frac{2x^4y^4}{3x^2y^2}\right)^{-2}$

20. $\left(\frac{a^4b^5c^{10}}{10}\right)^{-1}$

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21. $(-3a^2b^5)^0(-7a^{10}b^{10})^0(2ab)^0$

22. $\left(\frac{(10xy^2)(2x^2y^{-4})}{1}\right)^0$

A. $(5a^2b^2)^3(ab)^{-4}(ab)^{-5}(5a^{-2}b^{-3})^{-2}$

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B. $\left(\frac{2x^2y^2}{x^4y^4}\right)^2\left(\frac{2x^3y^6}{x^2y^2}\right)^{-2}\left(\frac{xy}{x^3y^2}\right)^3$