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Product and Quotient Properties of Exponents

Expand the following numbers and evaluate.

1. $2^{6}$ 2. $10^{3}$ 3. $\left(-3\right)^{5}$ 4. $0.25^{4}$

Simplify the following expressions. Evaluate any numerical answers.

5. $4^{2}∙4^{7}$ 6. $6∙6^{3}∙6^{2}$

7. $\frac{8^{3}}{8}$ 8. $\frac{2^{4}∙3^{5}}{2∙3^{2}}$

9. $b^{6}∙b^{3}$ 10. $5^{2}x^{4}∙x^{9}$

11. $\frac{y^{12}}{y^{5}}$ 12. $\frac{a^{8}∙b^{6}}{b∙a^{4}}$

13. $\frac{3^{7}∙x^{6}}{3^{3}∙x^{3}}$ 14. $d^{5}f^{3}d^{9}f^{7}$

15. $\frac{2^{8}m^{18}n^{14}}{2^{5}m^{11}n^{4}}$ 16. $\frac{9^{4}p^{5}q^{8}}{9^{2}pq^{2}}$

Evaluate the powers of negative numbers.

17. a. $\left(-2\right)^{1}$ b. $\left(-2\right)^{2}$ c. $\left(-2\right)^{3}$ d. $\left(-2\right)^{4}$ e. $\left(-2\right)^{5}$ f. $\left(-2\right)^{6}$