

Name: _____

Exponent Review Worksheet

Simplify each expression

1 $8^2 \cdot 8^1$

2 $(3^2)^4$

3 $10^4 \cdot 10^{-7}$

4 $4x^3 \cdot 2x^3$

5 $\frac{x^5y^6}{xy^2}$

6 $(4x^4y^{-4})^3$

7 $\frac{x^{-5}x^7}{xy^{-9}}$

8 $\frac{x^4x^3}{(x^2)^3}$

9 $(2a^3)(-5a)^2$

10 $(4a^6b^{-2})^{-3}$

11 $\frac{y^0}{7x^{-2}}$

12 $\frac{-20a^5b}{50a^{-1}b}$

13 $\frac{x^5x^{-1}}{x^{-3}x^{-2}}$

14 $\left(\frac{5x^3y}{20xy^5}\right)^4$

15 $(2ab^4)^2(ab)^5$

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Answers

1 $8^2 \cdot 8^1$

8^3

2 $(3^2)^4$

3^8

3 $10^4 \cdot 10^{-7}$

$\frac{1}{10^3}$

4 $4x^3 \cdot 2x^3$

$8x^6$

5 $\frac{x^5y^6}{xy^2}$

x^4y^4

6 $(4x^4y^{-4})^3$

$\frac{64x^{12}}{y^{12}}$

7 $\frac{x^{-5}x^7}{xy^{-9}}$

x^8

8 $\frac{x^4x^3}{(x^2)^3}$

$\frac{1}{x^5}$

9 $(2a^3)(-5a)^2$

$50a^5$

10 $(4a^6b^{-2})^{-3}$

$\frac{b^6}{4^3}$

11 $\frac{y^0}{7x^{-2}}$

$\frac{x^2}{7}$

12 $\frac{-20a^5b}{50a^{-1}b}$

$\frac{-2a^6}{5}$

13 $\frac{x^5x^{-1}}{x^{-3}x^{-2}}$

x^9

14 $\left(\frac{5x^3y}{20xy^5}\right)^4$

$\frac{x^8}{256y^{16}}$

15 $(2ab^4)^2(ab)^5$

$4a^7b^{13}$