

**Objective 1 – Simplify exponents using the Product-of-Powers Property**

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

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

3.  $4x^5(2x^7)$

4.  $(x^4y^6)(x^7y)$

**Objective 2 – Simplify exponents using the Power-of-a-Power Property**

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5.  $(x^3)^6$

6.  $(2n^2)^5$

7.  $(-3a^4)^3$

8.  $(m^5n^3)^5$

**Objective 3 – Simplify exponents using the Power-of-a-Product Property**

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9.  $(-4x)^2$

10.  $(mn)^6$

11.  $(-5xy)^3$

12.  $(abc)^8$

**Objective 4 – Simplify exponents using the Quotient-of-Powers Property**

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13.  $\frac{x^9}{x^7}$

14.  $\frac{-16a^5}{2a^4}$

15.  $\frac{m^5n^3}{n^2m^2}$

16.  $\frac{12x^{11}y^7}{16x^4y}$

**Objective 5 – Simplify exponents using the Power-of-a-Quotient Property**

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17.  $\left(\frac{n}{3}\right)^3$

18.  $\left(\frac{-4}{x}\right)^2$

19.  $\left(-\frac{a}{b}\right)^7$

20.  $\left(\frac{3}{m}\right)^4$

**Objective 6 – Simplify exponents using the Zero Exponent Property**

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21.  $m^0$

22.  $(-5)^0$

23.  $6x^0$

24.  $-3a^4b^0$

**Objective 7 – Simplify exponents using the Negative Exponent Property**

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25.  $3n^{-6}$

26.  $2^{-5}$

27.  $\frac{x^{-3}}{y}$

28.  $\frac{1}{a^{-4}}$

**Objective 8 – Simplify exponents using multiple properties**

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29.  $\left(\frac{2x^7}{y^2}\right)^3$

30.  $\frac{18a^3b}{-24a^5b}$

31.  $(4x^{-1}y^3z^0)^{-2}$

32.  $(-mn^4)^3(m^2n)$

33.  $\left(\frac{27b^4c^7}{18b^5c^4}\right)^3$

34.  $\frac{(-2x^3y)^3}{6x^9y^2}$

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

36.  $\frac{a^{-2}b^7c^0}{a^3b^{-1}}$