

Simplify # 7-24

(7) a^{11}

(9) $y^3 z^3$

(11) $a^4 b^6$

(13) bx^7

(15) $12x^4 y^8$

(17) $-15m^{11}$

(19) $10^5 = 100,000$

(21) $36p^2$

(23) $9p^2 r^4$

(8) x^{10}

(10) $l^5 k^3$

(12) $c^4 d^4$

(14) $20a^9$

(16) $7a^7 b^5$

(18) $8c^5 d^2$

(20) p^{36}

(22) $-27y^3$

(24) $4b^6 c^8$

Simplify # 3-14

(3) $-15x^6 y$

(5) $-6a^3 d^4$

(7) $5x^2 y^7$

(9) $-54m^5 n^4$

(11) $\frac{4}{9}p^2$

(13) $.064k^9$

(4) $8a^4 b^4 f^4$

(6) $-8g^8 h$

(8) $-x^4 y^3 z$

(10) $.04a^4 b^6$

(12) $\frac{1}{16}a^2 d^6$

(14) 4^8

Simplify each expression. Assume no denominator equals zero.

① 6

③ x^2

⑤ $\frac{1}{m^2}$

⑦ $\frac{n^4}{3}$

⑨ a^2b^3

② $9^4 = 6501$

④ $\frac{1}{t^2}$

⑥ $3d$

⑧ x^2

⑩ m^4

⑪ $-\frac{3w}{x^3}$

⑬ $\frac{16p^{14}}{49r^4}$

⑮ $\frac{1}{64}$

⑰ $\frac{11}{9}$

⑱ $\frac{1}{k^2}$

⑳ $\frac{1}{f^{11}}$

㉓ $\frac{9^4h^2}{f^5}$

㉕ $-\frac{3}{u^4}$

⑫ $-4x^2yz^3$

⑭ $\frac{1}{256}$

⑯ $\frac{9}{25}$

⑰ h^9

㉐ $\frac{m^3}{kl^6}$

㉒ 1

㉔ $3x^5y^2$

㉖ $-\frac{8x^5y^2}{z}$

Simplify each expression. Assume that no denominator equals zero.

① 8^4

② $a^3 b^3$

③ y

④ mn

⑤ $\frac{5d^2}{-4}$

⑥ $2yz$

⑦ $\frac{64 f^9 g^3}{27 h^{18}}$

⑧ $\frac{36 w^{10}}{49 p^{12} r^6}$

⑨ $\frac{-1}{6x^3}$

⑩ $\frac{1}{x^5 y^5}$

⑪ $\frac{p}{q^2 r^3}$

⑫ $\frac{1}{144}$

⑬ $\frac{49}{9}$

⑭ $\frac{81}{256}$

⑮ $2rs^5$

⑯ $\frac{-3}{u^4}$

⑰ $2c^4 f^7$

⑱ 1

⑲ $\frac{g^8 h^2}{9}$

⑳ $\frac{-6t^2 u^4}{x^9}$

㉑ $\frac{r}{27}$

㉒ $\frac{m^2}{n^2}$

㉓ $\frac{j}{k^{15}}$

㉔ $\frac{a^4}{40b^7}$

㉕ $\frac{g^4}{r^{13}}$

㉖ $\frac{c^8}{7d^2 h^4}$

㉗ $\frac{9x^2}{4y^2 z^0}$