

Name:

Date: Score:

Exponents Rules: Review Worksheet

Use laws of exponents to simplify. Write your answer in positive exponents

① $(a^4)^2$

② $p^6 \cdot p^{14}$

③ $\frac{p^7}{p^5}$

④ $(z^2)^3$

⑤ $\frac{q^{10}}{q^6}$

⑥ $\frac{l^2}{l}$

Simplify using the laws of exponents. Write your answer in positive exponents

⑦ $(x^3b)^4(xb^6)^2$

⑧ $\left(\frac{a^2b}{b^{-3}c^4}\right)^3(a^{-3}b)^{-2}$

⑨ $\left(\frac{x^2y^{-7}}{x^{-2}y^4}\right)^2$

⑩ $\left(\frac{p^3q^5}{r^7}\right) \cdot \left(\frac{p^2r^0q^3}{p^4r^2}\right)^3$

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Answers

① $(a^4)^2$

a^8

② $p^6 \cdot p^{14}$

p^{84}

③ $\frac{p^7}{p^5}$

p^2

④ $(z^2)^3$

z^6

⑤ $\frac{q^{10}}{q^6}$

q^4

⑥ $\frac{l^2}{l}$

l

⑦ $(x^3b)^4(xb^6)^2$

$x^{14}b^{16}$

⑧ $\left(\frac{a^2b}{b^{-3}c^4}\right)^3(a^{-3}b)^{-2}$

$\frac{a^2b^{10}}{c^{12}}$

⑨ $\left(\frac{x^2y^{-7}}{x^{-2}y^4}\right)^2$

$\frac{x^{12}}{y^{22}}$

⑩ $\left(\frac{p^3q^5}{r^7}\right) \cdot \left(\frac{p^2r^0q^3}{p^4r^2}\right)^3$

$\frac{p^{12}q^{39}}{r^{48}}$