Simplifying Exponents Practice

Name Key Per ABCDEF Date _____

Simplify. Your answer should contain only positive exponents.

1) $\frac{ba^3}{3a^2b^3}$

$\frac{a^3b}{3a^2b^3} \rightarrow \frac{ab^{-2}}{3} = \boxed{\frac{a}{3b^2}}$

2) $3x^{-3} \cdot 2x^{-2}$

$6x^{-5} \rightarrow \boxed{\frac{6}{x^5}}$

3) $\frac{a^0b^{-1}}{4ab^{-4}}$

$\frac{b^4}{4ab^1} = \boxed{\frac{b^3}{4a}}$

4) $(y^{-2})^4$

$y^{-8} = \boxed{\frac{1}{y^8}}$

5) $(x \cdot 2x^{-3})^4$

$x^4 \cdot 2^4 x^{-12}$

$2^4 \cdot x^{-8} = \boxed{\frac{16}{x^8}}$

6) $m^4n^0 \cdot (n^3)^3$

$m^4 \cdot n^9 = \boxed{m^4n^9}$

7) $(4a^{-3}b^4)^3$

$4^3 \cdot a^{-9}b^{12} = \boxed{\frac{64b^{12}}{a^9}}$

8) $(3a^4b^{-2})^3$

$3^3a^{12}b^{-6} = \boxed{\frac{27a^{12}}{b^6}}$

9) $\frac{(3r^2)^3}{r}$

$\frac{3^3r^6}{r} = \boxed{27r^5}$

10) $\frac{(2n)^3}{(3n^3)^2}$

$\frac{2^3n^3}{3^2n^6} = \frac{8n^3}{9n^6} = \boxed{\frac{8}{9n^3}}$