

Welcome Back Review

Simplify. Your answer should contain only positive exponents.

1) $6x^5y^{-3} \cdot x^5y^4$

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

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

4) $uv^2 \cdot (u^5v^{-4})^2$

5) $\frac{(xy^{-5})^4}{x^0y^5}$

6) $b^{\frac{1}{2}} \cdot \left(b^{\frac{4}{3}}\right)^{\frac{1}{4}}$

Simplify.

7) $3\sqrt[4]{80x^8y^2}$

8) $8\sqrt[3]{320a^7b^8}$

Write each expression in exponential form.

9) $(\sqrt[3]{6r})^4$

10) $(\sqrt[3]{3n})^4$

Write each expression in radical form.

11) $(5n)^{\frac{1}{3}}$

12) $(2v)^{\frac{5}{4}}$

Solve each equation.

13) $-8 + \sqrt[3]{k} = -4$

14) $(24 - 3n)^{\frac{3}{2}} = 729$

15) $\sqrt[4]{b} = 3$

16) $-1 = -(9b)^{\frac{1}{3}} + 2$

Answers to Welcome Back Review

1) $6x^{10}y$

2) $\frac{y^{16}}{16x^8}$

3) $\frac{1}{2ab^6}$

4) $\frac{u^{11}}{v^6}$

5) $\frac{x^4}{y^{25}}$

6) $b^{\frac{5}{6}}$

7) $6x^2\sqrt[4]{5y^2}$

8) $32a^2b^2\sqrt[3]{5ab^2}$

9) $(6r)^{\frac{4}{3}}$

10) $(3n)^{\frac{4}{3}}$

11) $\sqrt[3]{5n}$

12) $(\sqrt[4]{2v})^5$

13) $\{64\}$

14) $\{-19\}$

15) $\{81\}$

16) $\{3\}$