

Radical and Rational Exponents

Write each expression in radical form.

1) $4^{\frac{2}{3}}$

2) $6^{\frac{5}{2}}$

3) $3^{\frac{5}{3}}$

4) $5^{\frac{7}{4}}$

5) $3^{\frac{2}{3}}$

6) $(3v)^{\frac{7}{5}}$

7) $x^{\frac{2}{3}}$

8) $(5r)^{\frac{5}{4}}$

9) $(4n)^{\frac{2}{3}}$

10) $(2x^2)^{\frac{1}{4}}$

Write each expression in exponential form.

11) $(\sqrt[4]{n})^5$

12) $(\sqrt[3]{3p})^4$

13) $(\sqrt{v})^3$

14) $\sqrt[4]{5x}$

15) $(\sqrt[5]{10n})^8$

16) \sqrt{n}

17) $(\sqrt[4]{2n})^5$

18) $(\sqrt[6]{m})^7$

19) $(\sqrt{5n})^5$

20) $\sqrt[3]{4n^2}$

Simplify.

21) $(100000p^{15})^{\frac{3}{5}}$

22) $(36x^2)^{\frac{3}{2}}$

$$23) (81b^{12})^{\frac{5}{4}}$$

$$24) (64v^6)^{\frac{7}{6}}$$

$$25) (32m^{10})^{\frac{3}{5}}$$

$$26) (36v^6)^{\frac{1}{2}}$$

$$27) (216a^3)^{\frac{2}{3}}$$

$$28) (81x^4)^{\frac{5}{4}}$$

$$29) (25k^2)^{\frac{1}{2}}$$

$$30) (m^{12})^{\frac{5}{3}}$$