

Simplifying Radical Expressions

Date _____ Period _____

Simplify each one variable radical expression.

1) $\sqrt{192n^3}$

2) $\sqrt[4]{486m}$

3) $\sqrt[3]{40n^2}$

4) $\sqrt[3]{216x^3}$

5) $\sqrt{128r}$

6) $\sqrt[5]{256n}$

Simplify each two variable radical expression.

7) $\sqrt{252a^3b^4}$

8) $\sqrt[4]{128x^6y^8}$

9) $\sqrt[3]{56m^3n^2}$

10) $\sqrt[6]{384ab^8}$

11) $\sqrt[5]{224x^5y^4}$

12) $\sqrt{245x^3y}$

Simplify each three variable radical expression.

$$13) \sqrt[4]{405x^8y^8z^7}$$

$$14) \sqrt[5]{-256p^6q^7r^4}$$

$$15) \sqrt{175m^4p^3q^4}$$

$$16) \sqrt[3]{54x^2y^6z^5}$$

$$17) \sqrt[4]{64p^2qr}$$

$$18) \sqrt[7]{256ab^2c^9}$$

Simplify each three variable radical expression with leading coefficient.

$$19) -2\sqrt[5]{64x^4y^2z^4}$$

$$20) 7\sqrt{125h^4j^2k^2}$$

$$21) -7\sqrt[3]{-32x^4yz^3}$$

$$22) -6\sqrt[4]{80mp^2q}$$

$$23) 3\sqrt[7]{640h^3j^9k^3}$$

$$24) 4\sqrt[6]{448m^7p^3q^4}$$