R.6

Examples

① $\sqrt[3]{x^{12}} = x^{12 \div 3} = x^4$

② $\sqrt[4]{y^7} = \sqrt[4]{y^4 \cdot y^3} = \sqrt[4]{y^4} \cdot \sqrt[4]{y^3} = y\sqrt[4]{y^3}$

③ $\sqrt{20} = \sqrt{4 \cdot 5} = \sqrt{4} \cdot \sqrt{5} = 2\sqrt{5}$

④ $\sqrt[3]{16} = \sqrt[3]{8 \cdot 2} = \sqrt[3]{8} \cdot \sqrt[3]{2} = 2\sqrt[3]{2}$

$\sqrt[3]{2^3}$

⑤ $\sqrt[3]{250 x^3 y^8 z^{10}}$

$\sqrt[3]{125} \cdot \sqrt[3]{2} \cdot \sqrt[3]{x^3} \cdot \sqrt[3]{y^6} \cdot \sqrt[3]{y^2} \cdot \sqrt[3]{z^9} \cdot \sqrt[3]{z}$

$5\sqrt[3]{2} \cdot x \cdot y^2 \sqrt[3]{y^2} \cdot z^3 \sqrt[3]{z}$

$5xy^2z^3\sqrt[3]{2y^2z}$