

$$1) \sqrt[2]{3^4 \sqrt{3}} = ?$$

$$\sqrt[2]{3^4 \sqrt{3}} = {}^{2 \times 4}\sqrt{3^4 \times 3^1} = \sqrt[8]{3^5}$$

$$2) \sqrt[4]{5^2 \sqrt[2]{5^5 \sqrt[5]{5^3 \sqrt[3]{5}}}} = ?$$