

3) $\sqrt[3]{\sqrt[2]{\sqrt[3]{\sqrt[3]{\sqrt[2]{25}}}}} = ?$

$$\sqrt[3]{\sqrt[2]{\sqrt[3]{\sqrt[3]{\sqrt[2]{25}}}}} = 3 \times 2 \times 3 \times 3 \times 2 \sqrt[2]{25} = {}^{108}\sqrt{64}$$