

$$\frac{\sqrt[3]{27xy^7}}{\sqrt[3]{3x}} = \sqrt[3]{\frac{27xy^7}{3x}} = \sqrt[3]{9y^7} = \sqrt[3]{9 \cdot (y^2)^3 \cdot y} =$$
$$\sqrt[3]{(y^2)^3} \cdot \sqrt[3]{9y} = y^2 \sqrt[3]{9y}$$