

Wurzeln Aufgabe 121

$$\sqrt[3]{\sqrt[6]{u}} \times \sqrt[9]{\sqrt{u^4}} \times \sqrt[18]{u^7} \times \sqrt[9]{u^3} =$$

$$= u^{\frac{1}{3} \times \frac{1}{6}} \times (u^4)^{\frac{1}{9} \times \frac{1}{2}} \times u^{\frac{7}{18}} \times u^{\frac{3}{9}}$$

$$= u^{\frac{1}{18}} \times u^{\frac{4}{18}} \times u^{\frac{7}{18}} \times u^{\frac{6}{18}}$$

$$= u^{\frac{1}{18} + \frac{4}{18} + \frac{7}{18} + \frac{6}{18}}$$

$$= u^{\frac{18}{18}} = u$$