

# Schulübung

S. 121/7 a-d

$$\begin{aligned} \text{a) } \sqrt{y} \cdot \sqrt{y} &= \sqrt{y^2} \\ &= y \end{aligned}$$

$$\begin{aligned} \text{b) } \sqrt{y} \cdot \sqrt{y^3} &= \sqrt{y \cdot y^3} \\ &= \sqrt{y^4} \\ &= y^2 \end{aligned}$$

$$\begin{aligned} \text{c) } \sqrt{x} \cdot \sqrt{xy^2} &= \sqrt{x^2 y^2} \\ &= \sqrt{x} y \end{aligned}$$

$$\begin{aligned} \text{d) } \sqrt{5y} \cdot \sqrt{20y} &= \sqrt{5y \cdot 20y} \\ &= \sqrt{100y^2} \\ &= 10y \end{aligned}$$

Nr 8.

$$\begin{aligned} \text{a) } \sqrt{x^3} : \sqrt{x} &= \sqrt{\frac{x^3}{x}} \\ &= \sqrt{x^2} \\ &= x \end{aligned}$$

$$\begin{aligned} \text{b) } \sqrt{x^2 y} : \sqrt{y} &= \sqrt{\frac{x^2 y}{y}} \\ &= \sqrt{x^2} \\ &= x \end{aligned}$$

$$\begin{aligned} \text{c) } \sqrt{a} : \sqrt{ab^2} &= \sqrt{\frac{a}{ab^2}} \\ &= \sqrt{\frac{1}{b^2}} \\ &= \frac{1}{b} \end{aligned}$$

$$\begin{aligned} \text{d) } \sqrt{uv} : \sqrt{u^3} &= \sqrt{\frac{uv}{u^3}} \\ &= \sqrt{\frac{v}{u^2}} \\ &= \frac{\sqrt{v}}{u} \end{aligned}$$

Nr 9.

$$\begin{aligned} \text{a) } \sqrt{2u} \cdot \sqrt{4v} \cdot \sqrt{8uv} &= \sqrt{2u \cdot 4v \cdot 8uv} \\ &= \sqrt{64u^2 v^2} \\ &= 8uv \end{aligned}$$

$$\begin{aligned} \text{d) } \sqrt{3m} \cdot \sqrt{mn} \cdot \sqrt{6mn} &= \sqrt{3m \cdot mn \cdot 6mn} \\ &= \sqrt{18m^3 n^2} \\ &= \sqrt{18m} \sqrt{mn} \end{aligned}$$

$$\begin{aligned} \text{b) } \sqrt{x^2} \cdot \sqrt{3x} \cdot \sqrt{12y} &= \sqrt{x^2 \cdot 3x \cdot 12y} \\ &= \sqrt{36x^3 y} \\ &= 6x \sqrt{xy} \end{aligned}$$

$$\begin{aligned} \text{c) } \sqrt{5a} \cdot \sqrt{5b^2} \cdot \sqrt{a} &= \sqrt{5a \cdot 5b^2 \cdot a} \\ &= \sqrt{5a^2 \cdot 5b^2} \\ &= \sqrt{25a^2 b^2} \\ &= 5ab \end{aligned}$$