

Wurzeln Aufgabe 104

$$\begin{aligned} & (15 \times \sqrt{50} + 5 \times \sqrt{200} - 3 \times \sqrt{450}) \div \sqrt{10} = \\ & = (15 \times \sqrt{25 \times 2} + 5 \times \sqrt{100 \times 2} - 3 \times \sqrt{225 \times 2}) \div \sqrt{10} \\ & = (15 \times 5 \times \sqrt{2} + 5 \times 10 \times \sqrt{2} - 3 \times 15 \times \sqrt{2}) \div \sqrt{10} \\ & = (75 \times \sqrt{2} + 50 \times \sqrt{2} - 45 \times \sqrt{2}) \div \sqrt{10} \\ & = 80 \times \sqrt{2} \div \sqrt{10} = 80 \times \frac{\sqrt{2}}{\sqrt{10}} \\ & = \frac{80}{\frac{\sqrt{10}}{\sqrt{2}}} = \frac{80}{\sqrt{5}} \end{aligned}$$

Nenner rational machen:

$$\frac{80 \times \sqrt{5}}{\sqrt{5} \times \sqrt{5}} = \frac{80 \times \sqrt{5}}{5} = 16 \times \sqrt{5}$$