IV.

Zjednodušte výrazy: Zpět:

Výraz	Řešení	Výsledek
a) $\frac{d^2 : d^{-3}}{d^6}$	$\frac{d^2 : d^{-3}}{d^6} = d^2 : d^{-3} \cdot d^{-6} = d^{-1}$	d^{-1}, $d \neq 0$
b) $\frac{d^{\frac{-1}{3}} \sqrt{d^3}}{\sqrt[4]{d^{-3}}}$	$\frac{d^{\frac{-1}{3}} \cdot \sqrt{d^3}}{\sqrt[4]{d^{-3}}} = \frac{d^{\frac{-1}{3}} \cdot d^{\frac{3}{2}}}{d^{\frac{-3}{4}}} = d^{\frac{-4+18+9}{12}} = d^{\frac{23}{12}}$	$d^{\frac{23}{12}}$, $d > 0$
c) $\sqrt[4]{d^3 \cdot \sqrt{d}} \cdot d^{\frac{1}{2}}$	$\sqrt[4]{d^3 \cdot \sqrt{d}} \cdot d^{\frac{1}{2}} = d^{\frac{3}{4}} \cdot d^{\frac{1}{8}} \cdot d^{\frac{1}{2}} = d^{\frac{6+1+4}{8}} = d^{\frac{11}{8}}$	$d^{\frac{11}{8}}$, $d > 0$
d) $\sqrt[3]{32} \cdot \sqrt{8} \cdot \sqrt[4]{2}$	$\sqrt[3]{32} \cdot \sqrt{8} \cdot \sqrt[4]{2} = 2^{\frac{5}{3}} \cdot 2^{\frac{3}{2}} \cdot 2^{\frac{1}{4}} = 2^{\frac{20+18+3}{12}} = 2^{\frac{41}{12}}$	$2^{\frac{41}{12}}$
e) $3\sqrt{27} - 2\sqrt{12} - \sqrt{75}$	$3\sqrt{27} - 2\sqrt{12} - \sqrt{75} = 3\sqrt{3 \cdot 9} - 2 \cdot \sqrt{3 \cdot 4} - \sqrt{3 \cdot 25} =$ $= 9\sqrt{3} - 4\sqrt{3} - 5\sqrt{3} = 0$	0
f) $\frac{1000000 \cdot 0{,}001}{10^{-3}}$	$\frac{1000000 \cdot 0{,}001}{10^{-3}} = \frac{10^6 \cdot 10^{-3}}{10^{-3}} = 10^6$	10^6