Aufgabenblatt
zu Potenzen mit rationalem Exponenten

Level 3 – Expert – Blatt 2

Dokument mit 128 Aufgaben

Aufgabe A1

Vereinfache und bringe den Term in die Wurzeldarstellung.

a) $\left(2^{\frac{1}{2}}\right)^{\frac{1}{2}}$ b) $\left(6^{\frac{1}{4}}\right)^{\frac{1}{3}}$ c) $\left(3^{\frac{1}{3}}\right)^{\frac{1}{2}}$ d) $\left(4^{\frac{1}{7}}\right)^{\frac{1}{8}}$

e) $\left(\left(2^{\frac{1}{2}}\right)^{\frac{1}{2}}\right)^{\frac{1}{2}}$ f) $3^{1^{\frac{1}{3}}}$ g) $5^{\frac{1}{4}^{\frac{1}{2}}}$ h) $\left(\left(\left(7^{\frac{1}{7}}\right)^{\frac{1}{6}}\right)^{\frac{1}{5}}\right)^{\frac{1}{4}}$

i) $\left(2^{\frac{1}{3}}\right)^{-\frac{1}{2}}$ j) $\left(6^{\frac{1}{5}}\right)^{-\frac{1}{3}}$ k) $\left(3^{-\frac{1}{3}}\right)^{\frac{1}{2}}$ l) $\left(4^{\frac{1}{7}}\right)^{-\frac{1}{8}}$

m) $\left(\left(2^{\frac{1}{2}}\right)^{-\frac{1}{2}}\right)^{-\frac{1}{2}}$ n) $\left((3^{-1})^{\frac{1}{3}}\right)^{-\frac{1}{5}}$ o) $\left(\left(5^{\frac{1}{4}}\right)^{-\frac{1}{2}}\right)^{1}$ p) $\left(7^{-\frac{1}{7}}\right)^{-\frac{1}{6}^{-\frac{1}{5}}}$

Aufgabe A2

Vereinfache und bringe den Term in die Wurzeldarstellung.

a) $\left(x^{\frac{1}{2}}\right)^{\frac{1}{2}}$ b) $\left(y^{\frac{1}{4}}\right)^{\frac{1}{3}}$ c) $\left(z^{\frac{1}{3}}\right)^{\frac{1}{2}}$ d) $\left(a^{\frac{1}{7}}\right)^{\frac{1}{8}}$

e) $\left(\left(c^{\frac{1}{2}}\right)^{\frac{1}{2}}\right)^{\frac{1}{2}}$ f) $x^{1^{\frac{1}{5}}}$ g) $z^{\frac{1}{4}^{\frac{1}{2}}}$ h) $\left(\left(\left(a^{\frac{1}{7}}\right)^{\frac{1}{6}}\right)^{\frac{1}{5}}\right)^{\frac{1}{4}}$

i) $\left(x^{\frac{1}{3}}\right)^{-\frac{1}{2}}$ j) $\left(y^{\frac{1}{5}}\right)^{-\frac{1}{3}}$ k) $\left(z^{-\frac{1}{3}}\right)^{\frac{1}{2}}$ l) $\left(a^{\frac{1}{7}}\right)^{-\frac{1}{8}}$

m) $\left(\left(c^{\frac{1}{2}}\right)^{-\frac{1}{2}}\right)^{-\frac{1}{2}}$ n) $\left((y^{-1})^{\frac{1}{3}}\right)^{-\frac{1}{5}}$ o) $\left(\left(z^{\frac{1}{4}}\right)^{-\frac{1}{2}}\right)^{1}$ p) $\left(a^{-\frac{1}{7}}\right)^{-\frac{1}{6}^{-\frac{1}{5}}}$

Aufgabe A3

Vereinfache und bringe den Term in die Wurzeldarstellung.

a) $\left(2^{\frac{1}{a}}\right)^{\frac{1}{b}}$ b) $\left(6^{\frac{1}{c}}\right)^{\frac{1}{d}}$ c) $\left(3^{\frac{1}{x}}\right)^{\frac{1}{y}}$ d) $\left(4^{\frac{1}{k}}\right)^{\frac{1}{l}}$

e) $\left(\left(2^{\frac{1}{l}}\right)^{\frac{1}{m}}\right)^{\frac{1}{n}}$ f) $3^{1^{\frac{1}{b}}_{a}}$ g) $5^{\frac{1}{4}^{\frac{1}{a}}}$ h) $\left(\left(\left(7^{\frac{1}{a}}\right)^{\frac{1}{b}}\right)^{\frac{1}{a}}\right)^{\frac{1}{b}}$

i) $\left(2^{\frac{1}{a}}\right)^{-\frac{1}{b}}$ j) $\left(6^{\frac{1}{c}}\right)^{-\frac{1}{d}}$ k) $\left(3^{-\frac{1}{x}}\right)^{\frac{1}{y}}$ l) $\left(4^{\frac{1}{k}}\right)^{-\frac{1}{l}}$

m) $\left(\left(2^{\frac{1}{l}}\right)^{-\frac{1}{m}}\right)^{-\frac{1}{n}}$ n) $\left((3^{-1})^{\frac{1}{a}}\right)^{-\frac{1}{b}}$ o) $\left(\left(5^{\frac{1}{2}}\right)^{-\frac{1}{a}}\right)^{1}$ p) $\left(7^{-\frac{1}{a}}\right)^{-\frac{1}{b}^{-\frac{1}{c}}}$

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Aufgabe A4
Vereinfache und bringe den Term in die Wurzeldarstellung.

a) $\left(x^{\frac{1}{a}}\right)^{\frac{1}{b}}$ b) $\left(y^{\frac{1}{c}}\right)^{\frac{1}{d}}$ c) $\left(z^{\frac{1}{x}}\right)^{\frac{1}{y}}$ d) $\left(a^{\frac{1}{k}}\right)^{\frac{1}{l}}$

e) $\left(\left(c^{\frac{1}{l}}\right)^{\frac{1}{m}}\right)^{\frac{1}{n}}$ f) $x^{1^{\frac{1}{\frac{1}{b}}}}$ g) $z^{\frac{1}{4}^{\frac{1}{a}^{1}}}$ h) $\left(\left(\left(a^{\frac{1}{a}}\right)^{\frac{1}{b}}\right)^{\frac{1}{a}}\right)^{\frac{1}{b}}$

i) $\left(x^{\frac{1}{a}}\right)^{-\frac{1}{b}}$ j) $\left(y^{\frac{1}{c}}\right)^{-\frac{1}{d}}$ k) $\left(z^{-\frac{1}{x}}\right)^{\frac{1}{y}}$ l) $(a^{\frac{1}{k}})^{-\frac{1}{l}}$

m) $\left(\left(c^{\frac{1}{l}}\right)^{-\frac{1}{m}}\right)^{-\frac{1}{n}}$ n) $\left((y^{-1})^{\frac{1}{a}}\right)^{-\frac{1}{b}}$ o) $\left(\left(z^{\frac{1}{2}}\right)^{-\frac{1}{a}}\right)^{1}$ p) $\left(a^{-\frac{1}{a}}\right)^{-\frac{1}{b}^{-\frac{1}{c}}}$

Aufgabe A5
Vereinfache und bringe den Term in die Wurzeldarstellung.

a) $2^{\frac{1}{2}} \cdot 3^{\frac{1}{2}}$ b) $6^{\frac{1}{4}} \cdot 7^{\frac{1}{4}}$ c) $3^{\frac{1}{3}} \cdot 4^{\frac{1}{3}}$ d) $4^{\frac{1}{7}} \cdot 5^{\frac{1}{7}}$

e) $2^{\frac{1}{2}} \cdot 3^{\frac{1}{2}} \cdot 4^{\frac{1}{2}}$ f) $3^{\frac{1}{3}} \cdot 4^{\frac{1}{3}} \cdot 5^{\frac{1}{3}}$ g) $5^{\frac{1}{4}} \cdot 6^{\frac{1}{4}} \cdot 7^{\frac{1}{4}}$ h) $1^{\frac{1}{7}} \cdot 2^{\frac{1}{7}} \cdot 3^{\frac{1}{7}} \cdot 4^{\frac{1}{7}}$

i) $2^{-\frac{1}{3}} \cdot 3^{-\frac{1}{3}}$ j) $6^{-\frac{1}{5}} \cdot 7^{-\frac{1}{5}}$ k) $3^{-\frac{1}{3}} \cdot 4^{-\frac{1}{3}}$ l) $4^{-\frac{1}{7}} \cdot 5^{-\frac{1}{7}}$

m) $2^{-\frac{1}{2}} \cdot 3^{-\frac{1}{2}} \cdot 4^{-\frac{1}{2}}$ n) $3^{-\frac{1}{3}} \cdot 4^{-\frac{1}{3}} \cdot 5^{-\frac{1}{3}}$ o) $5^{-\frac{1}{4}} \cdot 6^{-\frac{1}{4}} \cdot 7^{-\frac{1}{4}}$ p) $1^{-\frac{1}{7}} \cdot 2^{-\frac{1}{7}} \cdot 3^{-\frac{1}{7}}$

Aufgabe A6
Vereinfache und bringe den Term in die Wurzeldarstellung.

a) $x^{\frac{1}{2}} \cdot y^{\frac{1}{2}}$ b) $y^{\frac{1}{4}} \cdot z^{\frac{1}{4}}$ c) $a^{\frac{1}{3}} \cdot b^{\frac{1}{3}}$ d) $c^{\frac{1}{7}} \cdot d^{\frac{1}{7}}$

e) $l^{\frac{1}{2}} \cdot m^{\frac{1}{2}} \cdot n^{\frac{1}{2}}$ f) $x^{\frac{1}{3}} \cdot y^{\frac{1}{3}} \cdot z^{\frac{1}{3}}$ g) $d^{\frac{1}{4}} \cdot e^{\frac{1}{4}} \cdot f^{\frac{1}{4}}$ h) $a^{\frac{1}{7}} \cdot b^{\frac{1}{7}} \cdot c^{\frac{1}{7}} \cdot d^{\frac{1}{7}}$

i) $x^{-\frac{1}{3}} \cdot y^{-\frac{1}{3}}$ j) $y^{-\frac{1}{4}} \cdot z^{-\frac{1}{4}}$ k) $a^{-\frac{1}{3}} \cdot b^{-\frac{1}{3}}$ l) $c^{-\frac{1}{7}} \cdot d^{-\frac{1}{7}}$

m) $l^{-\frac{1}{2}} \cdot m^{-\frac{1}{2}} \cdot n^{-\frac{1}{2}}$ n) $x^{-\frac{1}{3}} \cdot y^{-\frac{1}{3}} \cdot z^{-\frac{1}{3}}$ o) $d^{-\frac{1}{4}} \cdot e^{-\frac{1}{4}} \cdot f^{-\frac{1}{4}}$ p) $a^{-\frac{1}{7}} \cdot b^{-\frac{1}{7}} \cdot c^{-\frac{1}{7}}$

Aufgabe A7
Vereinfache und bringe den Term in die Wurzeldarstellung.

a) $2^{\frac{1}{a}} \cdot 3^{\frac{1}{a}}$ b) $6^{\frac{1}{c}} \cdot 7^{\frac{1}{c}}$ c) $3^{\frac{1}{x}} \cdot 4^{\frac{1}{x}}$ d) $4^{\frac{1}{k}} \cdot 5^{\frac{1}{k}}$

e) $2^{\frac{1}{l}} \cdot 3^{\frac{1}{l}} \cdot 4^{\frac{1}{l}}$ f) $3^{\frac{1}{a}} \cdot 4^{\frac{1}{a}} \cdot 5^{\frac{1}{a}}$ g) $5^{\frac{1}{b}} \cdot 6^{\frac{1}{b}} \cdot 7^{\frac{1}{b}}$ h) $2^{\frac{1}{a}} \cdot 4^{\frac{1}{b}} \cdot 3^{\frac{1}{a}} \cdot 5^{\frac{1}{b}}$

i) $2^{-\frac{1}{a}} \cdot 3^{-\frac{1}{a}}$ j) $6^{-\frac{1}{c}} \cdot 7^{-\frac{1}{c}}$ k) $3^{-\frac{1}{x}} \cdot 4^{-\frac{1}{x}}$ l) $4^{-\frac{1}{k}} \cdot 5^{-\frac{1}{k}}$

m) $2^{-\frac{1}{l}} \cdot 3^{-\frac{1}{l}} \cdot 4^{-\frac{1}{l}}$ n) $3^{-\frac{1}{a}} \cdot 4^{-\frac{1}{a}} \cdot 5^{-\frac{1}{a}}$ o) $5^{-\frac{1}{b}} \cdot 6^{-\frac{1}{b}} \cdot 7^{-\frac{1}{b}}$ p) $2^{-\frac{1}{a}} \cdot 4^{-\frac{1}{b}} \cdot 3^{-\frac{1}{a}}$

Aufgabe A8
Vereinfache und bringe den Term in die Wurzeldarstellung.

a) $x^{\frac{1}{a}} \cdot y^{\frac{1}{a}}$ b) $y^{\frac{1}{c}} \cdot z^{\frac{1}{c}}$ c) $a^{\frac{1}{x}} \cdot b^{\frac{1}{x}}$ d) $c^{\frac{1}{k}} \cdot d^{\frac{1}{k}}$

e) $m^{\frac{1}{l}} \cdot n^{\frac{1}{l}} \cdot o^{\frac{1}{l}}$ f) $d^{\frac{1}{a}} \cdot e^{\frac{1}{a}} \cdot f^{\frac{1}{a}}$ g) $u^{\frac{1}{y}} \cdot v^{\frac{1}{y}} \cdot w^{\frac{1}{y}}$ h) $a^{\frac{1}{l}} \cdot b^{\frac{1}{m}} \cdot c^{\frac{1}{l}} \cdot d^{\frac{1}{m}}$

i) $x^{-\frac{1}{a}} \cdot y^{-\frac{1}{a}}$ j) $y^{-\frac{1}{c}} \cdot z^{-\frac{1}{c}}$ k) $a^{-\frac{1}{x}} \cdot b^{-\frac{1}{x}} \cdot 3^{-\frac{1}{x}}$ l) $c^{-\frac{1}{k}} \cdot d^{-\frac{1}{k}}$

m) $m^{-\frac{1}{l}} \cdot n^{-\frac{1}{l}} \cdot o^{-\frac{1}{l}}$ n) $d^{-\frac{1}{a}} \cdot e^{-\frac{1}{a}} \cdot f^{-\frac{1}{a}}$ o) $u^{-\frac{1}{y}} \cdot v^{-\frac{1}{y}} \cdot w^{-\frac{1}{y}}$ p) $a^{-\frac{1}{a}} \cdot b^{-\frac{1}{a}} \cdot c^{-\frac{1}{a}}$

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Lösungen

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Lösung A1

a) $2^{\frac{1}{4}} = \sqrt[4]{2}$ b) $6^{\frac{1}{12}} = \sqrt[12]{6}$ c) $3^{\frac{1}{6}} = \sqrt[6]{3}$ d) $4^{\frac{1}{56}} = \sqrt[56]{4}$

e) $2^{\frac{1}{8}} = \sqrt[8]{2}$ f) $3^{\frac{1}{15}} = \sqrt[15]{3}$ g) $5^{\frac{1}{8}} = \sqrt[8]{5}$ h) $7^{\frac{1}{840}} = \sqrt[840]{7}$

i) $2^{-\frac{1}{6}} = \frac{1}{\sqrt[6]{2}}$ j) $6^{-\frac{1}{15}} = \frac{1}{\sqrt[15]{6}}$ k) $3^{-\frac{1}{6}} = \frac{1}{\sqrt[6]{3}}$ l) $4^{-\frac{1}{56}} = \frac{1}{\sqrt[56]{4}}$

m) $2^{\frac{1}{8}} = \sqrt[8]{2}$ n) $3^{-\frac{1}{15}} = \frac{1}{\sqrt[15]{3}}$ o) $5^{-\frac{1}{8}} = \frac{1}{\sqrt[8]{5}}$ p) $7^{-\frac{1}{210}} = \frac{1}{\sqrt[210]{7}}$

Lösung A2

a) $x^{\frac{1}{4}} = \sqrt[4]{x}$ b) $y^{\frac{1}{12}} = \sqrt[12]{y}$ c) $z^{\frac{1}{6}} = \sqrt[6]{z}$ d) $a^{\frac{1}{56}} = \sqrt[56]{a}$

e) $c^{\frac{1}{8}} = \sqrt[8]{c}$ f) $x^{\frac{1}{15}} = \sqrt[15]{x}$ g) $z^{\frac{1}{8}} = \sqrt[8]{z}$ h) $a^{\frac{1}{840}} = \sqrt[840]{a}$

i) $x^{-\frac{1}{6}} = \frac{1}{\sqrt[6]{x}}$ j) $y^{-\frac{1}{15}} = \frac{1}{\sqrt[15]{y}}$ k) $z^{-\frac{1}{6}} = \frac{1}{\sqrt[6]{z}}$ l) $a^{-\frac{1}{56}} = \frac{1}{\sqrt[56]{a}}$

m) $c^{\frac{1}{8}} = \sqrt[8]{c}$ n) $y^{-\frac{1}{15}} = \frac{1}{\sqrt[15]{y}}$ o) $z^{-\frac{1}{8}} = \frac{1}{\sqrt[8]{z}}$ p) $a^{-\frac{1}{210}} = \frac{1}{\sqrt[210]{a}}$

Lösung A3

a) $2^{\frac{1}{ab}} = \sqrt[ab]{2}$ b) $6^{\frac{1}{cd}} = \sqrt[cd]{6}$ c) $3^{\frac{1}{xy}} = \sqrt[xy]{3}$ d) $4^{\frac{1}{kl}} = \sqrt[kl]{4}$

e) $2^{\frac{1}{lmn}} = \sqrt[lmn]{2}$ f) $3^{\frac{1}{ab}} = \sqrt[ab]{3}$ g) $5^{\frac{1}{4a}} = \sqrt[4a]{5}$ h) $7^{\frac{1}{a^2b^2}} = \sqrt[a^2b^2]{7}$

i) $2^{-\frac{1}{ab}} = \frac{1}{\sqrt[ab]{2}}$ j) $6^{-\frac{1}{cd}} = \frac{1}{\sqrt[cd]{6}}$ k) $3^{-\frac{1}{xy}} = \frac{1}{\sqrt[xy]{3}}$ l) $4^{-\frac{1}{kl}} = \frac{1}{\sqrt[kl]{4}}$

m) $2^{\frac{1}{lmn}} = \sqrt[lmn]{2}$ n) $3^{\frac{1}{ab}} = \sqrt[ab]{3}$ o) $5^{-\frac{1}{2a}} = \frac{1}{\sqrt[2a]{5}}$ p) $7^{-\frac{1}{abc}} = \frac{1}{\sqrt[abc]{7}}$

Lösung A4

a) $x^{\frac{1}{ab}} = \sqrt[ab]{x}$ b) $y^{\frac{1}{cd}} = \sqrt[cd]{y}$ c) $z^{\frac{1}{xy}} = \sqrt[xy]{z}$ d) $a^{\frac{1}{kl}} = \sqrt[kl]{a}$

e) $c^{\frac{1}{lmn}} = \sqrt[lmn]{c}$ f) $x^{\frac{1}{ab}} = \sqrt[ab]{x}$ g) $z^{\frac{1}{4a}} = \sqrt[4a]{z}$ h) $a^{\frac{1}{a^2b^2}} = \sqrt[a^2b^2]{a}$

i) $x^{-\frac{1}{ab}} = \frac{1}{\sqrt[ab]{x}}$ j) $y^{-\frac{1}{cd}} = \frac{1}{\sqrt[cd]{y}}$ k) $z^{-\frac{1}{xy}} = \frac{1}{\sqrt[xy]{z}}$ l) $a^{-\frac{1}{kl}} = \frac{1}{\sqrt[kl]{a}}$

m) $c^{\frac{1}{lmn}} = \sqrt[lmn]{c}$ n) $y^{\frac{1}{ab}} = \sqrt[ab]{y}$ o) $z^{-\frac{1}{2a}} = \frac{1}{\sqrt[2a]{z}}$ p) $a^{-\frac{1}{abc}} = \frac{1}{\sqrt[abc]{a}}$

Lösung A5

a) $6^{\frac{1}{2}} = \sqrt{6}$ b) $42^{\frac{1}{4}} = \sqrt[4]{42}$ c) $12^{\frac{1}{3}} = \sqrt[3]{12}$ d) $20^{\frac{1}{7}} = \sqrt[7]{20}$

e) $24^{\frac{1}{2}} = \sqrt{24}$ f) $60^{\frac{1}{3}} = \sqrt[3]{60}$ g) $210^{\frac{1}{4}} = \sqrt[4]{210}$ h) $24^{\frac{1}{7}} = \sqrt[7]{24}$

i) $6^{-\frac{1}{3}} = \frac{1}{\sqrt[3]{6}}$ j) $42^{-\frac{1}{5}} = \frac{1}{\sqrt[5]{42}}$ k) $12^{-\frac{1}{3}} = \frac{1}{\sqrt[3]{12}}$ l) $20^{-\frac{1}{7}} = \frac{1}{\sqrt[7]{20}}$

m) $24^{-\frac{1}{2}} = \frac{1}{\sqrt{24}}$ n) $60^{-\frac{1}{3}} = \frac{1}{\sqrt[3]{60}}$ o) $210^{-\frac{1}{4}} = \frac{1}{\sqrt[4]{210}}$ p) $6^{-\frac{1}{7}} = \frac{1}{\sqrt[7]{6}}$

Lösung A6

a) $(xy)^{\frac{1}{2}} = \sqrt{xy}$ b) $(yz)^{\frac{1}{4}} = \sqrt[4]{yz}$ c) $(ab)^{\frac{1}{3}} = \sqrt[3]{ab}$ d) $(cd)^{\frac{1}{7}} = \sqrt[7]{cd}$

e) $(lmn)^{\frac{1}{2}} = \sqrt{lmn}$ f) $(xyz)^{\frac{1}{3}} = \sqrt[3]{xyz}$ g) $(def)^{\frac{1}{4}} = \sqrt[4]{def}$ h) $(abcd)^{\frac{1}{7}} = \sqrt[7]{abcd}$

i) $(xy)^{-\frac{1}{3}} = \frac{1}{\sqrt[3]{xy}}$ j) $(yz)^{-\frac{1}{4}} = \frac{1}{\sqrt[4]{yz}}$ k) $(ab)^{-\frac{1}{3}} = \frac{1}{\sqrt[3]{ab}}$ l) $(cd)^{-\frac{1}{7}} = \frac{1}{\sqrt[7]{cd}}$

m) $(lmn)^{-\frac{1}{2}} = \frac{1}{\sqrt{lmn}}$ n) $(xyz)^{-\frac{1}{3}} = \frac{1}{\sqrt[3]{xyz}}$ o) $(def)^{-\frac{1}{4}} = \frac{1}{\sqrt[4]{def}}$ p) $(abc)^{-\frac{1}{7}} = \frac{1}{\sqrt[7]{abc}}$

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Lösung A7

a) $6^{\frac{1}{a}} = \sqrt[a]{6}$ b) $42^{\frac{1}{c}} = \sqrt[c]{42}$ c) $12^{\frac{1}{x}} = \sqrt[x]{12}$ d) $20^{\frac{1}{k}} = \sqrt[k]{20}$

e) $24^{\frac{1}{l}} = \sqrt[l]{24}$ f) $60^{\frac{1}{a}} = \sqrt[a]{60}$ g) $210^{\frac{1}{b}} = \sqrt[b]{210}$

h) $6^{\frac{1}{a}} \cdot 20^{\frac{1}{b}} = \sqrt[a]{6} \cdot \sqrt[b]{20}$ i) $6^{-\frac{1}{a}} = \frac{1}{\sqrt[6]{a}}$ j) $42^{-\frac{1}{c}} = \frac{1}{\sqrt[c]{42}}$

k) $12^{-\frac{1}{x}} = \frac{1}{\sqrt[x]{12}}$ l) $20^{-\frac{1}{k}} = \frac{1}{\sqrt[k]{20}}$ m) $24^{-\frac{1}{l}} = \frac{1}{\sqrt[l]{24}}$ n) $60^{-\frac{1}{a}} = \frac{1}{\sqrt[a]{60}}$

o) $210^{-\frac{1}{b}} = \frac{1}{\sqrt[b]{210}}$ p) $6^{-\frac{1}{a}} \cdot 4^{-\frac{1}{b}} = \frac{1}{\sqrt[a]{6} \cdot \sqrt[b]{4}}$

Lösung A8

a) $(xy)^{\frac{1}{a}} = \sqrt[a]{xy}$ b) $(yz)^{\frac{1}{c}} = \sqrt[c]{yz}$ c) $(ab)^{\frac{1}{x}} = \sqrt[x]{ab}$ d) $(cd)^{\frac{1}{k}} = \sqrt[k]{cd}$

e) $(mno)^{\frac{1}{l}} = \sqrt[l]{mno}$ f) $(def)^{\frac{1}{a}} = \sqrt[a]{def}$ g) $(uvw)^{\frac{1}{y}} = \sqrt[y]{uvw}$

h) $(ac)^{\frac{1}{l}} \cdot (bd)^{\frac{1}{m}} = \sqrt[l]{ac} \cdot \sqrt[m]{bd}$ i) $(xy)^{-\frac{1}{a}} = \frac{1}{\sqrt[6]{xy}}$ j) $(yz)^{-\frac{1}{c}} = \frac{1}{\sqrt[c]{yz}}$

k) $(3ab)^{-\frac{1}{x}} = \frac{1}{\sqrt[x]{3ab}}$ l) $(cd)^{-\frac{1}{k}} = \frac{1}{\sqrt[k]{cd}}$ m) $(mno)^{-\frac{1}{l}} = \frac{1}{\sqrt[l]{mno}}$ n) $(def)^{-\frac{1}{a}} = \frac{1}{\sqrt[a]{def}}$

o) $(uvw)^{-\frac{1}{y}} = \frac{1}{\sqrt[y]{uvw}}$ p) $(abc)^{-\frac{1}{a}} = \frac{1}{\sqrt[a]{abc}}$

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