Aufgabenblatt zur Addition und Subtraktion von Wurzeln

Level 1 – Grundlagen – Blatt 1

Dokument mit 22 Aufgaben

Aufgabe A1

Fasse zusammen.

a)	$3\sqrt{2}+5\sqrt{2}$	=	
b)	$7\sqrt{5}-3\sqrt{5}$	=	
c)	$3\sqrt{3}+8\sqrt{3}-2\sqrt{3}$	=	
d)	$4\sqrt{7}-5\sqrt{7}+8\sqrt{7}-6\sqrt{7}$	=	
e)	$2\sqrt{13}+8\sqrt{13}-15\sqrt{13}$	=	
f)	$5\sqrt{10}-3\sqrt{10}-(8\sqrt{10}+4\sqrt{10})$	=	
g)	$4{,}2\sqrt{11}-2{,}7\sqrt{11}+0{,}2\sqrt{11}-\sqrt{11}$	=	
h)	$7\sqrt{a}+4\sqrt{a}-11\sqrt{a}+3\sqrt{a};\ (a\geq 0)$	=	
i)	$\frac{3}{2}\sqrt{2}+\frac{5}{6}\sqrt{2}-\frac{5}{24}\sqrt{2}-\frac{7}{8}\sqrt{2}+\frac{7}{4}\sqrt{2}$	=	

Aufgabe A2

Fasse zusammen.

a)	$3\sqrt{2}+4\sqrt{2}$	=	
b)	$9\sqrt{3}-7\sqrt{3}$	=	
c)	$12\sqrt{11}+5\sqrt{11}$	=	
d)	$4\sqrt{6}+3\sqrt{6}-2\sqrt{6}$	=	
e)	$4\sqrt{x}+3\sqrt{x}$	=	
f)	$14\sqrt{x}-9\sqrt{x}$	=	
g)	$2\sqrt{a}-3\sqrt{a}-\sqrt{a};\ (a>=0)$	=	
h)	$3\sqrt{x}-2\sqrt{x}+4\sqrt{x};\ (x\geq 0)$	=	

Aufgabe A3

Fasse zusammen.

a)	$2\sqrt{2}-3\sqrt{3}+5\sqrt{2}-8\sqrt{3}$	=	
b)	$4\sqrt{5}+8\sqrt{7}-3\sqrt{5}+4\sqrt{3}-5\sqrt{7}$	=	
c)	$0{,}7\sqrt{a}+1{,}3\sqrt{b}-4{,}2\sqrt{a}-2{,}4\sqrt{b}+0{,}4\sqrt{a}-1{,}3\sqrt{a};\ (a;b\geq 0)$	=	
d)	$\frac{4}{5}\sqrt{11}+\frac{2}{3}\sqrt{3}-\frac{4}{15}\sqrt{11}+\frac{5}{6}\sqrt{3}$	=	
e)	$5\sqrt{15}-15\sqrt{5}+7\sqrt{13}-8\sqrt{5}+13\sqrt{13}-2\sqrt{15}$	=	

Aufgabenblatt zur Addition und Subtraktion von Wurzeln

Lösungen

Level 1 – Grundlagen – Blatt 1

Lösung A1

a)	$3\sqrt{2}+5\sqrt{2}$	=	$8\sqrt{2}$
b)	$7\sqrt{5}-3\sqrt{5}$	=	$4\sqrt{5}$
c)	$3\sqrt{3}+8\sqrt{3}-2\sqrt{3}$	=	$9\sqrt{3}$
d)	$4\sqrt{7}-5\sqrt{7}+8\sqrt{7}-6\sqrt{7}$	=	$\sqrt{7}$
e)	$2\sqrt{13}+8\sqrt{13}-15\sqrt{13}$	=	$-5\sqrt{13}$
f)	$5\sqrt{10}-3\sqrt{10}-(8\sqrt{10}+4\sqrt{10})$	=	$-2\sqrt{10}$
g)	$4{,}2\sqrt{11}-2{,}7\sqrt{11}+0{,}2\sqrt{11}-\sqrt{11}$	=	$0{,}7\sqrt{11}$
h)	$7\sqrt{a}+4\sqrt{a}-11\sqrt{a}+3\sqrt{a};\ (a\geq 0)$	=	$3\sqrt{a}$
i)	$\frac{3}{2}\sqrt{2}+\frac{5}{6}\sqrt{2}-\frac{5}{24}\sqrt{2}-\frac{7}{8}\sqrt{2}+\frac{7}{4}\sqrt{2}$	=	$3\sqrt{2}$

Lösung A2

a)	$3\sqrt{2}+4\sqrt{2}$	=	$7\sqrt{2}$
b)	$9\sqrt{3}-7\sqrt{3}$	=	$2\sqrt{3}$
c)	$12\sqrt{11}+5\sqrt{11}$	=	$17\sqrt{11}$
d)	$4\sqrt{6}+3\sqrt{6}-2\sqrt{6}$	=	$5\sqrt{6}$
e)	$4\sqrt{x}+3\sqrt{x}$	=	$7\sqrt{x}$
f)	$14\sqrt{x}-9\sqrt{x}$	=	$5\sqrt{x}$
g)	$2\sqrt{a}-3\sqrt{a}-\sqrt{a};\ (a >= 0)$	=	$-2\sqrt{a}$
h)	$3\sqrt{x}-2\sqrt{x}+4\sqrt{x};\ (x\geq 0)$	=	$5\sqrt{x}$

Lösung A3

a)	$2\sqrt{2}-3\sqrt{3}+5\sqrt{2}-8\sqrt{3}$	=	$7\sqrt{2}-11\sqrt{3}$
b)	$4\sqrt{5}+8\sqrt{7}-3\sqrt{5}+4\sqrt{3}-5\sqrt{7}$	=	$\sqrt{5}+3\sqrt{7}+4\sqrt{3}$
c)	$0{,}7\sqrt{a}+1{,}3\sqrt{b}-4{,}2\sqrt{a}-2{,}4\sqrt{b}+0{,}4\sqrt{a}-1{,}3\sqrt{a};\ (a;b\geq 0)$		
		=	$-4{,}4\sqrt{a}-1{,}1\sqrt{b}$
d)	$\frac{4}{5}\sqrt{11}+\frac{2}{3}\sqrt{3}-\frac{4}{15}\sqrt{11}+\frac{5}{6}\sqrt{3}$	=	$\frac{8}{15}\sqrt{11}+\frac{10}{6}\sqrt{3}$
e)	$5\sqrt{15}-15\sqrt{5}+7\sqrt{13}-8\sqrt{5}+13\sqrt{13}-2\sqrt{15}$		
		=	$3\sqrt{15}-23\sqrt{5}+20\sqrt{13}$