

## Lösungen Wurzelgleichungen I

### Ergebnisse:

E1	Ergebnisse	
	a) $\sqrt{x} = 9 \Rightarrow D = \mathbb{R}_+ \quad L = \{81\}$	b) $\sqrt{x} = \frac{1}{2} \Rightarrow D = \mathbb{R}_+ \quad L = \left\{\frac{1}{4}\right\}$
	c) $\sqrt{x} = \frac{2}{3} \Rightarrow D = \mathbb{R}_+ \quad L = \left\{\frac{4}{9}\right\}$	d) $4 \cdot \sqrt{3x} = 12 \Rightarrow D = \mathbb{R}_+ \quad L = \{3\}$
	e) $\frac{2}{5} \cdot \sqrt{2x} = \frac{8}{5} \Rightarrow D = \mathbb{R}_+ \quad L = \{8\}$	f) $\sqrt{x+5} = 3 \Rightarrow D = \{x \mid x \geq -5\}_{\mathbb{R}} \quad L = \{4\}$

E2	Ergebnisse	
	a) $\sqrt{12-x} = 2 \Rightarrow D = \{x \mid x \leq 12\}_{\mathbb{R}} \quad L = \{8\}$	
	b) $x + \sqrt{x^2 + 21} = 3 \Rightarrow D = \mathbb{R} \quad L = \{-2\}$	
	c) $\frac{2}{\sqrt{3x+19}} = \frac{1}{4} \Rightarrow D = \left\{x \mid x \geq -\frac{19}{3}\right\}_{\mathbb{R}} \quad L = \{15\}$	
	d) $\frac{x+1}{\sqrt{x^2+13}} = 1 \Rightarrow D = \mathbb{R} \quad L = \{6\}$	
	e) $5 \cdot \sqrt{x-2} - 3 \cdot \sqrt{x-2} = 6 \Rightarrow D = \{x \mid x \geq 2\}_{\mathbb{R}} \quad L = \{11\}$	
	f) $3 \cdot \sqrt{x+5} - 2 \cdot \sqrt{x+5} = 6 \Rightarrow D = \{x \mid x \geq -5\}_{\mathbb{R}} \quad L = \{31\}$	

E3	Ergebnisse	
	a) $4 \cdot \sqrt{x-1} = 3 \cdot \sqrt{x+6} \Rightarrow D = \{x \mid x \geq 1\}_{\mathbb{R}} \quad L = \{10\}$	
	b) $15 \cdot \sqrt{3x+9} = 10 \cdot \sqrt{8x+9} \Rightarrow D = \left\{x \mid x \geq -\frac{9}{8}\right\}_{\mathbb{R}} \quad L = \{9\}$	
	c) $\frac{6}{\sqrt{x+1}} = \frac{4}{\sqrt{x-4}} \Rightarrow D = \{x \mid x \geq 4\}_{\mathbb{R}} \quad L = \{8\}$	
	d) $\sqrt{x+5} = \sqrt{x+1} \Rightarrow D = \{x \mid x \geq -1\}_{\mathbb{R}} \quad L = \{4\}$	
	e) $8 - \sqrt{x} = \sqrt{x-16} \Rightarrow D = \{x \mid x \geq 16\}_{\mathbb{R}} \quad L = \{25\}$	
	f) $\sqrt{x+3} = 5 - \sqrt{x-2} \Rightarrow D = \{x \mid x \geq 2\}_{\mathbb{R}} \quad L = \{6\}$	