

### 3. Bez

### Wurzeln

### Lösungen AB 7

1. Welche der folgenden Ergebnisse sind richtig, welche sind falsch?  
Kreuze entsprechendes an.

- |  |                                       |                                       |
|--|---------------------------------------|---------------------------------------|
| a) $\sqrt{4} + \sqrt{9} = \sqrt{13}$                 | <input type="checkbox"/> r            | <input checked="" type="checkbox"/> f |
| b) $\sqrt{6,25} + \sqrt{6,25} = \sqrt{12,5}$         | <input type="checkbox"/> r            | <input checked="" type="checkbox"/> f |
| c) $\sqrt{400} - \sqrt{100} = \sqrt{100}$            | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| d) $\sqrt{8} + \sqrt{2} = \sqrt{10}$                 | <input type="checkbox"/> r            | <input checked="" type="checkbox"/> f |
| e) $\sqrt{8} - \sqrt{2} = \sqrt{2}$                  | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| f) $\sqrt{1} - \sqrt{0,25} = \sqrt{0,75}$            | <input type="checkbox"/> r            | <input checked="" type="checkbox"/> f |
| g) $\sqrt{1} + \sqrt{1} = \sqrt{4}$                  | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| h) $\sqrt{4} + \sqrt{4} = \sqrt{8}$                  | <input type="checkbox"/> r            | <input checked="" type="checkbox"/> f |
| i) $\sqrt{25} + \sqrt{25} = \sqrt{100}$              | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| j) $\sqrt{0,5} + \sqrt{0,5} = \sqrt{2}$              | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| k) $2\sqrt{2} + \sqrt{2} = 3\sqrt{2}$                | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| l) $\sqrt{2} + \sqrt{5} = \sqrt{7}$                  | <input type="checkbox"/> r            | <input checked="" type="checkbox"/> f |
| m) $\sqrt{x^4} + \sqrt{x^4} = 2\sqrt{x^4}$           | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| n) $\sqrt{4x^8} + \sqrt{4x^8} = \sqrt{16x^8}$        | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| o) $\sqrt{xy} + \sqrt{y^2} = y\sqrt{xy}$             | <input type="checkbox"/> r            | <input checked="" type="checkbox"/> f |
| p) $\sqrt{5x^4} + \sqrt{5x^4} = \sqrt{20x^4}$        | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| q) $\sqrt{64x^2} + \sqrt{49x^2} = \sqrt{225x^2}$     | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| r) $\sqrt{0,75} + \sqrt{0,75} = \sqrt{3}$            | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| s) $\sqrt{3y^6} + \sqrt{3y^6} = \sqrt{12y^6}$        | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| t) $\sqrt{17x^8} + \sqrt{17x^8} = \sqrt{68x^8}$      | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| u) $(\sqrt{2})^3 = \sqrt{8}$                         | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| v) $\sqrt{0,3} + \sqrt{0,3} + \sqrt{0,3} = \sqrt{3}$ | <input checked="" type="checkbox"/> r | <input type="checkbox"/> f            |
| w) $\sqrt{\quad} + \sqrt{\quad} = \sqrt{\quad}$      | <input type="checkbox"/> r            | <input type="checkbox"/> f            |
| x) $\sqrt{\quad} + \sqrt{\quad} = \sqrt{\quad}$      | <input type="checkbox"/> r            | <input type="checkbox"/> f            |
| y) $\sqrt{\quad} + \sqrt{\quad} = \sqrt{\quad}$      | <input type="checkbox"/> r            | <input type="checkbox"/> f            |
| z) $\sqrt{\quad} + \sqrt{\quad} = \sqrt{\quad}$      | <input type="checkbox"/> r            | <input type="checkbox"/> f            |

$$\sqrt{0,5} = \sqrt{\frac{1}{2}} = \frac{1}{\sqrt{2}} = \frac{1 \cdot \sqrt{2}}{\sqrt{2} \cdot \sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$\sqrt{\frac{3}{4}} = \frac{\sqrt{3}}{2}$$

$$\sqrt{0,3} = \sqrt{\frac{1}{3}} = \frac{1}{\sqrt{3}} = \frac{1 \cdot \sqrt{3}}{\sqrt{3} \cdot \sqrt{3}} = \frac{\sqrt{3}}{3}$$