

1. Berechne bzw. vereinfache!

a) $\frac{\sqrt{72}}{\sqrt{8}} =$

b) $\frac{\sqrt{250}}{\sqrt{5} \cdot \sqrt{2}} =$

c) $\frac{\sqrt{360}}{\sqrt{40}} =$

d) $\sqrt{147} : \sqrt{3} =$

e) $\frac{\sqrt{\frac{2}{15}}}{\sqrt{\frac{5}{24}}} =$

f) $\sqrt{\frac{3}{35}} : \sqrt{\frac{5}{21}} =$

g) $\frac{\sqrt{24ab^2} \cdot \sqrt{50a^3b}}{\sqrt{8a} \cdot \sqrt{6ab}} =$

h) $\frac{\sqrt{24x^2yz}}{\sqrt{6y^3z^3}} =$

i) $\sqrt{\frac{4}{25} \cdot 0,09} =$

2. Ziehe die Wurzel teilweise!

a) $\sqrt{75} =$

b) $\sqrt{600} =$

c) $\sqrt{\frac{27}{121}} =$

d) $\sqrt{125r^2} =$

e) $\sqrt{\frac{150a^3b^2}{288c^4}} =$

3. Fasse zusammen!

a) $3\sqrt{2} + 5\sqrt{2} =$

b) $4\sqrt{7} - 5\sqrt{7} + 8\sqrt{7} - 6\sqrt{7} =$

c) $4\sqrt{5} + 8\sqrt{7} - 3\sqrt{5} + 4\sqrt{3} - 5\sqrt{7} =$

d) $7\sqrt{600} + 8\sqrt{28} - 13\sqrt{150} - 5\sqrt{63} =$

e) $\sqrt{8} + \sqrt{72} + \sqrt{98} =$

f) $\sqrt{12} + \sqrt{48} + \sqrt{75} =$

4. Mache den Nenner rational!

a) $\frac{2\sqrt{12}}{\sqrt{12}+4} =$

b) $\frac{7-\sqrt{3}}{\sqrt{3}+1} =$

c) $\frac{2\sqrt{3}}{3\sqrt{2}+2\sqrt{3}} =$

d) $\frac{3-\sqrt{7}}{3+\sqrt{7}} =$

5. Gib die Definitionsmenge an!

a) $\sqrt{25-a^2}$

b) $\sqrt{7x-4}$

c) $\sqrt{(a-5)^2}$

d) $\sqrt{12-b^2}$