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) $\sqrt{125r^2s} =$ 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) $\sqrt{12-b^2}$