**MOCNINY A ODMOCNINY**

Upravte výrazy:

1. $\left(\frac{14}{16}\right)^{0}-\left(-2\right)^{-3}+\left(-\frac{2}{5}\right)^{-2}-\left(-\frac{3}{2}\right)^{-2}-\left(-\frac{6}{7}\right)^{-3}$ $\left[\frac{230}{27}\right]$
2. $\frac{2-a^{-1}}{\left(2-a\right)^{-1}}$ $\left[\frac{-2a^{2}+5a-2}{a}\right]$
3. $\left(\frac{3ab}{25x^{2}y^{2}}\right)^{-3}:\left(\frac{4a}{5xy^{2}}\right)^{-3}$ $\left[\frac{8000x^{3}}{27b^{3}}\right]$
4. $\sqrt{\frac{x}{y}\sqrt[3]{\frac{x^{2}}{y^{2}}\sqrt[4]{\frac{x^{3}}{y^{3}}}}}$ $\left[\sqrt[24]{\frac{x^{23}}{y^{23}}}\right]$
5. $4x\sqrt[3]{\frac{1}{\sqrt[4]{x}}}3x^{2}\sqrt[3]{\frac{1}{\sqrt{x}}}$ $\left[12x^{2}\sqrt[4]{x^{3}}\right]$
6. $\frac{\sqrt{3\sqrt[4]{3^{2}}}}{\sqrt[3]{3\sqrt[3]{3^{2}}}}$ $\left[\sqrt[36]{3^{7}}\right]$
7. $\left(\frac{1}{a}\sqrt{\frac{a^{3}}{b}}+\frac{1}{b}\sqrt{\frac{b^{3}}{a}}\right).\left(\frac{a}{b}\sqrt{\frac{b}{a}}-\frac{b}{a}\sqrt{\frac{a}{b}}\right)$ $\left[\frac{a^{2}-b^{2}}{ab}\right]$
8. $5\sqrt{72}+6\sqrt[3]{250}-5\sqrt{98}+3\sqrt[3]{432}-4\sqrt{750}$ $\left[-5\sqrt{2}+48\sqrt[3]{2}-20\sqrt{30}\right]$
9. $\left(\sqrt{3+\sqrt{8}}+\sqrt{3-\sqrt{8}}\right)^{2}$ $\left[8\right]$

1. $\frac{5\sqrt{15}-4\sqrt{3}}{3\sqrt{3}-2\sqrt{15}}$ $\left[- \frac{38+7\sqrt{5}}{11}\right]$
2. $\sqrt{y}.\sqrt[3]{y^{2}.}\sqrt[4]{y^{3}}$ $\left[y^{\frac{23}{12}}\right]$
3. $\left\{\left[\frac{m^{\frac{1}{2}}. m^{-2}}{m^{\frac{1}{3}}}\right]^{-2}\right\}^{\frac{1}{2}}$ $\left[m^{\frac{11}{6}}\right]$
4. $\frac{\left(15^{\frac{1}{3}}. 27^{-\frac{1}{2}}\right)^{-3}}{\left(25^{\frac{1}{4}}. 9^{\frac{1}{8}}\right)^{-2}}:\frac{\sqrt{3\sqrt[3]{3}}}{\sqrt[3]{3\sqrt[4]{27}}}$ $\left[3^{\frac{47}{12}}\right]$