Multiplying and Dividing Radicals

Perform the given operation and express in simplest form

1. $\sqrt{10x^2y^5} \bullet \sqrt{5xy^4}$

2. $\sqrt[3]{16x^3y^6} \bullet \sqrt[3]{8xy^3}$

3. $5\sqrt{12y} \bullet 2\sqrt{3x^3y}$

4. $6x\sqrt[3]{9x^4y^5} \bullet 2x^2y\sqrt[3]{6x^2y^2}$

5. $-2\sqrt{5xy^3} \bullet 4\sqrt{6x^4y^2}$

6. $2y^2\sqrt[3]{25y^6} \bullet xy\sqrt[3]{10x^5y^3}$

7. $\dfrac{8x^3\sqrt{40x^5y^2}}{2x\sqrt{10xy}}$

8. $\dfrac{42x^2y^5\sqrt[3]{160x^9y^{10}}}{6xy^2\sqrt[3]{4x^2y^4}}$

9. $\dfrac{10\sqrt{250x^4y^5z^2}}{2\sqrt{5xyz}}$

10. $\dfrac{20xy^4\sqrt[3]{48x^8y^{12}}}{4x\sqrt[3]{3x^2y^3}}$

11. $\dfrac{32x^8\sqrt{96x^5y^9}}{8x^6\sqrt{3xy^2}}$

12. $\dfrac{15y^4\sqrt[3]{96x^{20}y^{15}}}{3y\sqrt[3]{4x^4y^8}}$