$$\frac{12}{\sqrt{g^5}} \cdot \frac{\sqrt{g}}{\sqrt{g}} = \frac{12\sqrt{g}}{\sqrt{g^6}} = \boxed{\frac{12\sqrt{g}}{g^3}}$$

$$\frac{2}{\sqrt{m^{11}}} \cdot \frac{\sqrt{m}}{\sqrt{m}} = \frac{2\sqrt{m}}{\sqrt{m^{12}}} = \boxed{\frac{2\sqrt{m}}{m^6}}$$

$$\frac{1}{\sqrt[3]{p}} \cdot \frac{\sqrt[3]{p^2}}{\sqrt[3]{p^2}} = \boxed{\frac{\sqrt[3]{p^2}}{p}}$$

$$\sqrt[3]{p^3}$$

$$\frac{7}{\sqrt[5]{d^2}} \cdot \frac{\sqrt[5]{d^3}}{\sqrt[5]{d^3}} = \boxed{\frac{7\sqrt[5]{d^3}}{d}}$$

$$\sqrt[5]{d^5}$$

Rationalize each denominator and simplify. A
variables are posit

$$\frac{3}{\sqrt[6]{a^{15}}} \cdot \frac{\sqrt[6]{a^3}}{\sqrt[6]{a^3}} = \frac{\sqrt[6]{a^3}}{\sqrt[6]{a^{18}}} = \frac{3\sqrt[6]{a^3}}{a^3}$$

What is the smallest quantity can be put in the r
the second radical in order to multiply the two ra
be able to perform the root of the entire r

1. $\sqrt{3w^5x^9} \cdot \sqrt{3w\ x} = \sqrt{9w^6x^{10}} = 3w^3x^5$

2. $\sqrt{12g^4h^{13}} \cdot \sqrt{3\ h} = \sqrt{36g^4h^{14}} = 6g^2h^7$

What is the smallest quantity can be put in the r
the second radical in order to multiply the two ra
be able to perform the root of the entire r

3. $\sqrt[3]{7c^7d^{11}} \cdot \sqrt[3]{7^2c^2d} = \sqrt[3]{7^3c^9d^{12}} = 7c^3d^4$

4. $\sqrt[3]{36a^5b^{16}} \cdot \sqrt[3]{6ab^2} = \sqrt[3]{6^3a^6b^{18}} = 6a^2b^3$
6^2

Rationalize each denominator and
Assume all variables are po

1. $\frac{1}{\sqrt[3]{ab^2}} \cdot \frac{\sqrt[3]{a^2b}}{\sqrt[3]{a^2b}} = \frac{\sqrt[3]{a^2b}}{ab}$

2.

$$\frac{9}{\sqrt[4]{c^2d^3e}} \cdot \frac{\sqrt[4]{c^2de^3}}{\sqrt[4]{c^2de^3}} = \frac{9\sqrt[4]{c^2de^3}}{\sqrt[4]{c^4d^4e^4}}$$

$$= \boxed{\frac{9\sqrt[4]{c^2de^3}}{cde}}$$

3.

Rationalize each denominator and Assume all variables are po

$$\frac{a\sqrt[4]{6b}}{\sqrt[4]{12a^3b^5c}} = \frac{a}{\sqrt[4]{2a^3b^4c}} \cdot \frac{\sqrt[4]{8ac^3}}{\sqrt[4]{8ac^3}}$$

you can simplify the ratio of the two radicals first then rationalize.

$$= \frac{a\sqrt[4]{8ac^3}}{2abc} = \boxed{\frac{\sqrt[4]{8ac^3}}{2bc}}$$

4.

Rationalize each denominator and Assume all variables are po

$$\frac{12j^4k}{\sqrt[4]{8j^7k^{17}}} \cdot \frac{\sqrt[4]{2jk^3}}{\sqrt[4]{2jk^3}} = \frac{12j^4k\sqrt[4]{2jk^3}}{2j^2k^5}$$

$$= \boxed{\frac{6j^2\sqrt[4]{2jk^3}}{k^4}}$$

5.

Rationalize each denominator and Assume all variables are po

$$\frac{48x^{12}y}{\sqrt[5]{4x^{13}y^{21}}} \cdot \frac{\sqrt[5]{2^3x^2y^4}}{\sqrt[5]{2^3x^2y^4}} = \frac{48x^{12}y\sqrt[5]{2^3x^2y^4}}{2x^3y^5}$$

$$\frac{4x}{2^2} \qquad \sqrt[5]{2^5x^{15}y^{25}}$$

$$= \boxed{\frac{24x^9\sqrt[5]{2^3x^2y^4}}{y^4}}$$

Rationalize each denominator and
Assume all variables are po

6.

$$\left(\frac{5+\sqrt{2}-\sqrt{3}}{\sqrt{3}}\right) \cdot \frac{\sqrt{3}}{\sqrt{3}} = \boxed{\frac{5\sqrt{3}+\sqrt{6}-3}{3}}$$

Rationalize each denominator and
Assume all variables are po

7.

$$\left(\frac{15-\sqrt[3]{25}}{\sqrt[3]{5}}\right) \cdot \frac{\sqrt[3]{5^2}}{\sqrt[3]{5^2}} = \frac{15\sqrt[3]{5^2}-5\sqrt[3]{5}}{5}$$

$$\boxed{3\sqrt[3]{5^2}-\sqrt[3]{5}}$$

$$\sqrt[3]{5^4}$$

You can now finish H\

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Problems 28, 30, 31, 34, 47, 48, 50,