Radicals - Adding and Subtracting - Simplification (Values and Variables)

Name

1 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{8xw^4} - \sqrt{27x^3w} - \sqrt{8xw^4}$$

A $5w^4\sqrt{x^3} - 3x\sqrt{3xw} - 4w^2\sqrt{x}$

B $2w^2\sqrt{2x} - 3x\sqrt{3xw} - 2w^2\sqrt{2x}$

2 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{44zx^4} - \sqrt{99zx^4} - \sqrt{28x}$$

A $2x^2\sqrt{11z} - 4x^4\sqrt{12z} - 2\sqrt{7x}$

B $2x^2\sqrt{11z} - 3x^2\sqrt{11z} - 2\sqrt{7x}$

3 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{112t^3y^2} + \sqrt{12t^2y^4} - \sqrt{112t^3y^2}$$

A $4ty\sqrt{7t} + 2ty^2\sqrt{3} - 4ty\sqrt{7t}$

B $ty\sqrt{10t} + 2ty^2\sqrt{3} - 4ty\sqrt{7t}$

4 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{63q^2n^3} - \sqrt{8q^3n^4} - \sqrt{112q^2n^3}$$

A $5q^3n\sqrt{6n^3} - qn^2\sqrt{5q} - 4qn\sqrt{7n}$

B $3qn\sqrt{7n} - 2qn^2\sqrt{2q} - 4qn\sqrt{7n}$

5 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt[3]{704} - \sqrt[3]{88} - \sqrt[3]{297m^2p^2}$$

A $4\sqrt[3]{11} - 2\sqrt[3]{11} - 3\sqrt[3]{11m^2p^2}$

B $4\sqrt[3]{11} - 2\sqrt[3]{11} - \sqrt[3]{10mp}$

6 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt[3]{88z^4r} - \sqrt[3]{88z} - \sqrt[3]{297z^4r}$$

A $2z\sqrt[3]{11zr} - 2\sqrt[3]{11z} - z^2\sqrt[3]{13zr}$

B $2z\sqrt[3]{11zr} - 2\sqrt[3]{11z} - 3z\sqrt[3]{11zr}$

7 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{20p^2} + \sqrt{125p^2} - \sqrt{18z^4}$$

A $2p\sqrt{5} + 5p\sqrt{5} - 3z^2\sqrt{2}$

B $p^2\sqrt{3} + p^3\sqrt{4} - 3z^2\sqrt{2}$

8 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{80r^4y^3} - \sqrt{45r^4y^3} - \sqrt{175ry^2}$$

A $7r^4y\sqrt{6y^2} - 3r^2y\sqrt{5y} - 5y\sqrt{7r}$

B $4r^2y\sqrt{5y} - 3r^2y\sqrt{5y} - 5y\sqrt{7r}$