Simplify Radical Expressions Using Properties of Radicals

1. Use the product property to multiply. Assume that all variables can be any real number

$$\sqrt[3]{-2} \cdot \sqrt[3]{13}$$

2. Use the product property to multiply. Assume that all variables can be any real number

$$\sqrt[5]{\frac{-12x^4}{3}} \cdot \sqrt[5]{\frac{3}{4x^2}}$$

3. Simplify each radical using the Product Property. Assume that all variables can be any real number

$$\sqrt{48}$$

4. Simplify each radical using the Product Property. Assume that all variables can be any real number

$$\sqrt[4]{80}$$

5. Simplify each radical using the Product Property. Assume that all variables can be any real number

$$\sqrt{18a^4}$$

6. Simplify each radical using the Product Property. Assume that all variables can be any real number

$$\sqrt[3]{-52p^6}$$

7. Simplify each radical using the Product Property. Assume that all variables can be any real number

$$\sqrt{50m^2n^3}$$

8. Simplify each radical using the Product Property. Assume that all variables can be any real number

$$\sqrt{x^{13}}$$

9. Simplify each radical using the Product Property. Assume that all variables can be any real number

$$\sqrt[7]{x^{23}}$$

10. Simplify each radical using the Product Property. Assume that all variables can be any real number

$$\sqrt[5]{(a+b)^{27}}$$

11. Simplify each expression

$$\frac{4-\sqrt{24}}{4}$$

12. Simplify each expression

$$\frac{12-\sqrt{48}}{24}$$

13. Multiply and simplify. Assume that all variables are greater than or equal to zero

$$\sqrt{5}\cdot\sqrt{20}$$

14. Multiply and simplify. Assume that all variables are greater than or equal to zero

$$\sqrt{3x^2}\cdot\sqrt{6x}$$

15. Multiply and simplify. Assume that all variables are greater than or equal to zero

$$-2\sqrt{10p^2q^5}\cdot 5\sqrt{8pq^2}$$

16. Multiply and simplify. Assume that all variables are greater than or equal to zero

$$\sqrt[5]{36(a+b)^4}\cdot\sqrt[5]{54(a+b)^{13}}$$

17. Simplify each expression. Assume that all variables are greater than zero

$$\sqrt{\frac{2}{9}}$$

18. Simplify each expression. Assume that all variables are greater than zero

$$\sqrt[3]{\frac{-8a^{33}}{27b^{15}}}$$

19. Divide and simplify. Assume that all variables are greater than zero

$$\frac{\sqrt[3]{128}}{\sqrt[3]{2}}$$

20. Divide and simplify. Assume that all variables are greater than zero

$$\frac{\sqrt{225m^9n^4}}{\sqrt{5mn^6}}$$

21. Divide and simplify. Assume that all variables are greater than zero

$$\frac{\sqrt{144a^{10}b^{-2}}}{\sqrt{6a^{-12}b^6}}$$

22. Multiply and simplify.

$$\sqrt{5}\cdot\sqrt[3]{2}$$

23. Multiply and simplify.

$$\sqrt{10}\cdot\sqrt[3]{3}$$