koolearn 新东方在线

Radicals and rational exponents

1.Simplify $\sqrt{77}$.

A. 77

B. $\sqrt{77}$

C. $7\sqrt{11}$

D. $11\sqrt{7}$

2.Simplify $\sqrt{43}$.

A. $\sqrt{43}$

B. 43

C. $4\sqrt{3}$

D. $3\sqrt{4}$

3.Simplify $\sqrt{49}$.

A. 49

B. $2\sqrt{7}$

C. $7\sqrt{2}$

D. 7

4.Simplify $\sqrt{98}$.

A. $7\sqrt{2}$

B. $2\sqrt{7}$

C. $\sqrt{98}$

D. $2\sqrt{49}$

5.If q3 · (q4)2=qx, then which of the following is the value of x?

A. 9
B. 11
C. 18
D. 19

6. $(\frac{1}{2})-2+30$

What is the value of the above expression?

A. $-\frac{1}{4}$

B. $\frac{1}{4}$

C. 4

D. 5

7. $\sqrt[3]{24v^3w^8}$

Which of the following is equivalent to the above expression?

A. $2vw2\sqrt[3]{3}$

B. $8vw2\sqrt[3]{3}$

C. $2vw2\sqrt[3]{3w^2}$

D. $8vw2\sqrt[3]{3w^2}$

8. $2\sqrt[3]{4} \cdot 2\sqrt[3]{2}$

What is the value of the above expression?

A. 4

B. 8

C. 16

D. 32

9. $\frac{\sqrt[4]{y}\sqrt{y}}{\sqrt[3]{y}}$

If the expression above is equal to yM for y≠0, then what is the value of M?

10. $\frac{x}{\sqrt[3]{x}}$

Which of the following is equivalent to the above expression for x≠0?

A. 1

B. $\sqrt[3]{x}$

C. $\sqrt[3]{x^2}$

D. x^3

11. $\frac{y+y^2}{y^{-\frac{2}{3}}}$

Which of the following expressions is equivalent to the expression above assuming y is nonzero?

A. $y^{-\frac{2}{3}} + y^{-3}$

B. $y^{\frac{2}{3}} + y^{3}$

C. $y^{\frac{1}{3}} + y^{\frac{4}{3}}$

D. $y^{\frac{5}{3}} + y^{\frac{8}{3}}$

12. $\frac{\sqrt{8c^{20}}}{\sqrt{32c^4}}$

Which of the following is equivalent to the above expression for $c \neq 0$?

A. $\frac{1}{2}c^4$

B. $\frac{1}{2}c^8$

C. $\frac{1}{4}c^{16}$

D. $\frac{1}{4}c^2\sqrt{c}$

13. $(x^{\frac{7}{4}} \cdot x^4)^4$

Which of the following expressions is equivalent to the expression above assuming x is nonzero?

A. $x^{\frac{39}{4}}$

B. x^{11}

C. x^{23}

D. x^{28}

14.$\sqrt{2y^3z} \cdot \sqrt{8y^{13}z^8}$

Which of the following is equivalent to the above expression for y,z≥0?

A. 4y4z3

B. 8y4z3

C. 4 y8z4$\sqrt{z}$

D. 8y8z4$\sqrt{z}$

15. $\frac{\sqrt{75x^4}}{\sqrt{12x^7}}$

Which of the following expressions is equivalent to the expression above?

A. $\frac{5x\sqrt{3x}}{6}$

B. $\frac{5\sqrt{3x}}{6x^2}$

C. $\frac{5}{2\sqrt{x}}$

D. $\frac{5\sqrt{x}}{2x^2}$

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Thanks

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