

Simplifying with Exponents Practice



svkzmlxx

Name: _____

Date: _____

1. Simplify: $(5a^2)(3a^7)$

- A. $8a^{14}$ B. $8a^9$ C. $15a^9$ D. $53a^9$

2. $5(y^2)^2 =$ _____

- A. $25y$ B. $5y^2$ C. $5y^4$ D. $25y^4$

3. The expression $\frac{(10w^3)^2}{5w}$ is equivalent to

- A. $2w^5$ B. $2w^8$ C. $20w^5$ D. $20w^8$

4. $(6x)^3 =$ _____

- A. $9x^3$ B. $18x^3$ C. $27x^3$ D. $216x^3$

5. Simplify: $(4n^3)(2n^2)$

- A. $6n^5$ B. $8n^5$ C. $8n^6$ D. $42n^5$

6. $(x^3)^5$ is equivalent to which expression?

- A. x^{15} B. x^8 C. x^1 D. $x^{0.6}$

7. Simplify: $(-3y^5)^3$

- A. $-9y^8$ B. $-9y^{15}$
C. $-27y^8$ D. $-27y^{15}$

8. Simplify: $(7xy^3)^2$

- A. $-14x^2y^9$ B. $-14x^2y^5$
C. $49x^2y^6$ D. $49x^2y^9$

9. The value of 5^{-2} is

- A. $-\frac{1}{25}$ B. $\frac{1}{25}$ C. -10 D. -25

10. Which expression is equivalent to $(3x^2)^{-1}$?

- A. $\frac{1}{3x^2}$ B. $-3x^2$ C. $\frac{1}{9x^2}$ D. $-9x^2$

11. $(x^4y^5)^3 =$ _____

- A. $x^{12}y^{15}$ B. $x^{64}y^{125}$
C. $(xy)^{60}$ D. x^4y^{15}

12. Simplify: $(-3a^3)^2(2ab)^4$

- A. $-54a^{10}b^4$ B. $72a^{10}b^4$
C. $144a^{10}b^4$ D. $72a^9b^4$

13. $(a^5b^6)^5 =$ _____

- A. $a^{10}b^{11}$ B. $a^{25}b^{30}$
C. a^5b^{11} D. $a^{3125}b^{7776}$

14. What is the meaning of $(6x)^4$?

- A. $6 \cdot x \cdot x \cdot x \cdot x$
B. $4 \cdot 6 \cdot x$
C. $6 \cdot 6 \cdot 6 \cdot 6 \cdot x \cdot x \cdot x \cdot x$
D. $4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot x \cdot x \cdot x \cdot x$

15. Simplify: $(-2x^3) \times (3x^4) \times (4x^2)$

- A. $-24x^9$ B. $24x^9$
C. $-24x^{24}$ D. $5x^9$

16. Simplify: $(2y^4)^2$

- A. $4y^4$ B. $4y^8$ C. y^{16} D. y^8

17. What is the meaning of $(4x)^3$?

- A. $3 \cdot 3 \cdot 3 \cdot 3 \cdot x \cdot x \cdot x$ B. $4 \cdot 4 \cdot 4 \cdot x \cdot x \cdot x$
C. $4 \cdot 3 \cdot$ D. $4 \cdot x \cdot x \cdot x$

18. Simplify: $(-2x^4)^3$

- A. $-6x^7$ B. $-6x^{12}$ C. $-8x^7$ D. $-8x^{12}$

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1.
Answer: C
Objective: N.RN.2
2.
Answer: C
Objective: N.RN.2
3.
Answer: C
4.
Answer: D
Objective: N.RN.2
5.
Answer: B
Objective: N.RN.2
6.
Answer: A
Objective: N.RN.2
7.
Answer: D
Objective: N.RN.2
8.
Answer: C
Objective: N.RN.2
9.
Answer: B
10.
Answer: A
11.
Answer: A
Objective: N.RN.2
12.
Answer: C
Objective: N.RN.2
13.
Answer: B
Objective: N.RN.2
14.
Answer: C
Objective: N.RN.2

15.
Answer: A
Objective: N.RN.2
16.
Answer: B
Objective: N.RN.2
17.
Answer: B
Objective: N.RN.2
18.
Answer: D
Objective: N.RN.2