

Math Whiz Unit 3: Expressions

Name: _____

Exponents, Order of Operations, & Evaluating Expressions

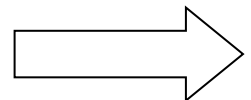
- Which shows $8 \cdot 8 \cdot 8$ in **exponential form**?
A. 3^8
B. 8^3
C. 512
D. $3 \cdot 8$
- Find the value of 3^4 .
A. 12
B. 34
C. 64
D. 81
- What is the value of 17^0 ?
A. 0
B. 1
C. 17
D. cannot be determined
- Evaluate: $\frac{(1+2)^3-12}{5}$
A. 0.6
B. 3
C. 4
D. 5
- Evaluate:* $5^2 - (2 \times 8) + 9$
A. 0
B. 3
C. 17
D. 18
- Evaluate: $5m^2 \div (2m)$ for $m = 4$
A. 5
B. 10
C. 18
D. 50
- Evaluate $c^2 - 2b$ if $b = 12$ and $c = 7$
A. 10
B. 25
C. 37
D. 198

Translating Words to Expressions

- Which phrase is **NOT** the same as $2x + 5$?
A. The sum of 5 and twice a number
B. 5 more than the product of 2 and x
C. 5 added to 2 groups of x
D. Twice the sum of x and 5
- Which algebraic expression represents how much prize money was won: "\$20 less than last year's prize."
A. $p - 20$
B. $20 - p$
C. $20p$
D. $20 < p$
- Mila's dog weighs 4 pounds more than the weight of Keiko's dog. Which expression could be used to find the weight of Mila's dog?
A. $k + 4$
B. $4k$
C. $4 \div k$
D. $4 - k$

Identifying Parts of Expressions

- Choose ALL of the **coefficients** in the expression. $5x^3 - 2x^3 + 6x - 4$
A. 2
B. 3
C. 4
D. 5
E. 6
- Which part of the expression $9^3 - (4 + 3)$ represents a sum?
A. 9^3
B. $9^3 - 7$
C. 722
D. $(4 + 3)$



Equivalent Expressions

13. Simplify the expression: $8x + x^2 + 9x^2 + 5x$

- A. $23x^2$
- B. $10x^2 + 13x$
- C. $18x^2 + 5x$
- D. $10x^4 + 13x$

14. Use the **distributive property** to find an equivalent expression for $3(2 + x)$.

- A. $6 + x$
- B. $9x$
- C. $6x$
- D. $6 + 3x$

15. Use the **distributive property** to find an equivalent expression for $5(2x - 1)$.

- A. $10x - 5$
- B. $10x - 1$
- C. $5x$
- D. $10x + 5$

16. Choose ALL expressions that are equivalent to $3x + 6 + x$.

- A. $4x + 6$
- B. $2x + 4x + 3$
- C. $10x$
- D. $4(x + 6)$
- E. $2(2x + 3)$

17. Which expression is equivalent to $2 + 3n + 2 + 9n$?

- A. $16n$
- B. $3n + 8$
- C. $4(3n + 1)$
- D. $4(3n + 4)$

Unit 3 Mastery Score:

_____ /17

Answer Key:

1) B

2) D

3) B

4) B

5) D

6) B

7) B

8) D

9) A

10) A

11) A, D, E

12) D

13) B

14) D

15) A

16) A, E

17) C