

Evaluating Powers of Whole Numbers

Name: _____

Date: _____

Remember: A power shows repeated multiplication. For example, $3^4 = 3 \times 3 \times 3 \times 3 = 81$

Part A: Write in Expanded Form and Evaluate

Write each power as repeated multiplication, then calculate the answer.

1. $2^5 =$ _____ $=$ _____

2. $4^3 =$ _____ $=$ _____

3. $5^2 =$ _____ $=$ _____

4. $10^4 =$ _____ $=$ _____

5. $3^4 =$ _____ $=$ _____

6. $6^2 =$ _____ $=$ _____

Part B: Evaluate Each Power

Calculate the value of each power.

7. $2^3 =$ _____

8. $7^2 =$ _____

9. $1^5 =$ _____

10. $8^2 =$ _____

11. $3^3 =$ _____

12. $2^4 =$ _____

13. $5^3 =$ _____

14. $9^2 =$ _____

15. $10^3 =$ _____

16. $4^2 =$ _____

17. $2^2 =$ _____

18. $6^3 =$ _____

Part C: Write as a Power

Express each multiplication as a power.

19. $5 \times 5 \times 5 =$ _____

20. $7 \times 7 =$ _____

21. $2 \times 2 \times 2 \times 2 =$ _____

22. $10 \times 10 \times 10 \times 10 \times 10 =$ _____

23. $4 \times 4 \times 4 =$ _____

Part D: Challenge Questions

24. Which is greater: 2^5 or 5^2 ? _____

25. Find the value: $3^2 + 4^2 =$ _____

26. If $2^n = 32$, what is the value of n ? _____