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. 7×7 = _____
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? _____