Zero and Negative Exponents

Name: _____ Date: _____

Remember: Any number to the power of 0 equals 1 (e.g. $5^0 = 1$). A negative exponent means "reciprocal" (e.g. $2^{-3} = 1/2^3 = 1/8$).

Part A: Zero Exponents

Evaluate each expression.

1. 7^0 = _____
2. 15^0 = _____
3. $(-4)^0$ = _____
4. 100^0 = _____
5. $(1/2)^0$ = _____
6. $(-25)^0$ = _____

Part B: Negative Exponents (Write as Fractions)

Rewrite each expression with a positive exponent, then evaluate.

7. 2^{-3} = _____
8. 5^{-2} = _____
9. 3^{-1} = _____
10. 10^{-2} = _____
11. 4^{-2} = _____
12. 2^{-5} = _____

Part C: Negative Exponents (Write as Decimals)

Evaluate each expression and write your answer as a decimal.

13. 10^{-1} = _____
14. 10^{-3} = _____
15. 5^{-1} = _____
16. 2^{-4} = _____

Part D: Mixed Practice

Evaluate each expression. Write answers as fractions or whole numbers.

17. $8^0 + 2^{-2}$ = _____
18. 3^{-3} = _____
19. $6^{-1} \times 6^1$ = _____
20. $(2^{-1})^2$ = _____
21. $4^0 \times 4^{-1}$ = _____
22. 10^{-4} = _____