

Name _____

Math 8

Integer Exponents

Practice and Problem Solving

Find the value of each power.

1. $5^3 =$ _____

2. $7^{-2} =$ _____

3. $51^1 =$ _____

4. $3^{-4} =$ _____

5. $1^{12} =$ _____

6. $64^0 =$ _____

7. $4^{-3} =$ _____

8. $4^3 =$ _____

9. $10^5 =$ _____

Find the missing exponent.

10. $n^3 = n^{\square} \cdot n^{-3}$

11. $\frac{a^{\square}}{a^2} = a^4$

12. $(r^4)^{\square} = r^{12}$

Simplify each expression. **Work on separate paper !**

13. $(9 - 3)^2 - (5 \cdot 4)^0 =$ _____

14. $(2 + 3)^5 \div (5^2)^2 =$ _____

15. $4^2 \div (6 - 2)^4 =$ _____

16. $[(1 + 7)^2]^2 \cdot (12^2)^0 =$ _____

Simplify each expression. **Work on separate paper !**

1. $(7 - 3)^2 \cdot (6 - 2)^3 =$ _____

2. $(7 - 3)^2 \div (6 - 2)^3 =$ _____

3. $(2 \cdot 5^3) \div (9 - 4)^4 =$ _____

4. $[(3 + 7)^2]^2 \cdot (10^2)^0 =$ _____

5. $(3 \cdot 4)^2 \div (6 \cdot 2)^4 =$ _____

6. $[(2^2)^2]^2 \cdot 2^3 =$ _____

Tell whether you will add, subtract, or multiply the exponents. Then simplify by finding the value of the expression.

1. $\frac{3^6}{3^3} \rightarrow$ _____

2. $8^2 \cdot 8^{-3} \rightarrow$ _____

3. $(3^2)^3 \rightarrow$ _____

4. $5^3 \cdot 5^1 \rightarrow$ _____

5. $\frac{4^2}{4^4} \rightarrow$ _____

6. $(6^2)^2 \rightarrow$ _____