

Unit 7: Exponents and Scientific Notation

PRACTICE

Name: _____ Date: _____

Show all work. Write each answer as an exact value; give scientific notation as $a \times 10^b$ with $1 \leq a < 10$.

1. Simplify using exponent rules and write as a single power of 3: $3^5 \times 3^2$. Give your answer in the form 3^n .

Answer: _____

2. Simplify and write as a single power: $2^9 / 2^4$. Give your answer in the form 2^n .

Answer: _____

3. Simplify $(5^3)^2$ and write as a single power of 5 in the form 5^n .

Answer: _____

4. Evaluate 4^{-2} . Write your answer as a fraction.

Answer: _____

5. Evaluate 7^0 .

Answer: _____

6. Simplify $6^8 / 6^8$ using exponent rules and write the resulting numerical value.

Answer: _____

7. Write the number 4,500,000 in scientific notation.

Answer: _____

8. Write the number 0.00032 in scientific notation.

Answer: _____

9. Write 6.07×10^5 as a standard whole number.

Answer: _____

10. Multiply and write the result in scientific notation: $(3 \times 10^4) \times (2 \times 10^5)$.

Answer: _____

11. Divide and write the result in scientific notation: $(8 \times 10^7) / (4 \times 10^3)$.

Answer: _____

12. The numbers 5×10^8 and 5×10^6 are given. How many times larger is 5×10^8 than 5×10^6 ?

Answer: _____