

Name: _____

Date: _____ Score: _____

Exponents and Scientific Notation

Write the following in expanded form.

1 $(3x^2 \cdot y)^2$

2 2^3

3 $(-4)^2$

Simplify. Your answer should contain only positive exponents.

4 $5a \cdot a^4 \cdot 2a$

5 $(2^2)^4$

6 $(3x^2)^3$

Write each number in standard form.

7 $9.401 \times 10^6 =$ _____

9 $5.6 \times 10^{-6} =$ _____

8 $4.74 \times 10^5 =$ _____

10 $9.69 \times 10^7 =$ _____

Write each number in scientific notation.

11 $0.026 =$ _____

14 $7.32 \times 10^{-4} =$ _____

12 $2205.2 =$ _____

15 $4.571 \times 10^4 =$ _____

13 $146.45 =$ _____

16 $8.016 \times 10^{-6} =$ _____

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Exponents and Scientific Notation

Answers

1 $(3x^2 \cdot y)^2$

3.x.x.x.y.y

2 2^3

2.2.2

3 $(-4)^2$

-4.-4

4 $5a \cdot a^4 \cdot 2a$

10a⁶

5 $(2^2)^4$

2⁸

6 $(3x^2)^3$

27x⁶

7 $9.401 \times 10^6 =$ 9,401,000

9 $5.6 \times 10^{-6} =$ 0.0000056

8 $4.74 \times 10^5 =$ 474,000

10 $9.69 \times 10^7 =$ 96,900,000

11 $0.026 =$ 2.6×10^{-2}

14 $7.32 \times 10^{-4} =$ 0.000732

12 $2205.2 =$ 2.2052×10^3

15 $4.571 \times 10^4 =$ 45,710

13 $146.45 =$ 1.4645×10^2

16 $8.016 \times 10^{-6} =$ 0.000008016