**Exponents Review Sheet with Answers**

Practice and Check your answers when you are done.. If you are struggling see help on bottom of page

**Write the letter for the correct answer in the blank at the right of each question.**

**1.** What is the value of the expression (−4)3?

**6.** What is 3.471 × 10–5 written in standard form?

9*x*8*y*4

**7.**

**9.**

**8.**

**6.**

**I.** 0.0001

**G.**

**F.** −105

**3.** Using exponents, what is the simplified form of the expression (−3*x*4*y*2)2?

**2.** Using exponents, what is the simplified form of the expression ?

**5.**

**5.** The Statue of Liberty weighs 450,000 pounds. What is this number written in scientific notation?

**A.** 4.5 × 10–5 **C.** 4.5 × 104

**B.** 4.5 × 10–4 **D.** 4.5 × 105

**I.** 2*x*3

**4.**

**H.** 10–5

**4.** How is the expression 10−5 written using a positive exponent?

**D.**

**3.**

**C.** –9*x*8*y*4

**B.** 6*x*6*y*4

**A.** –6*x*6*y*4

**F.**

**2.**

**H.** 6*x*3

**G.** 63

23

**D.** 64

**C.** 12

**B.** –12

**A.** –64

**1.**

SCORE

PERIOD

NAME DATE

**A**

**I**

**C**

**G**

**D**



**D**



**B**

**B**

**C**

**G**

**10.** The top speed of a cheetah is approximately 1.2 × 102 kilometers per hour, while the speed of the fastest human is approximately 4 × 101 kilometers per hour. How many times faster is the top speed of a cheetah than the speed of a human?

Which statement is true?

**A**

1. The cheetah is 3 times fasters than the human
2. The cheetah is 30 times faster than the human
3. The human is 3 times faster than the cheetah
4. The human is 30 times faster than the cheetah

**10.**

SCORE

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**18**

THINGS TO REMEMBER

|  |  |  |
| --- | --- | --- |
| **Laws of Exponents**Product law1. Keep the base the same
2. Add the exponents

Quotient Law1. Keep the base the same
2. Subtract the exponents

Power to a Power1. Keep the base the same
2. Multiply the exponents
 | **Multiply Monomials**1. Multiply Coefficients
2. Keep the base (variable) the same
3. Add Exponents

**Divide Monomials**1. Divide Coefficients
2. Keep the base (variable) the same
3. Subtract the exponents
 | **Negative Exponents**1. Take the reciprocal
2. Make the exponents positive

**Zero Exponents**Anything to the zero power is 1 |
| **Add /Subtract Scientific Notation**1. Put the #’s in standard form
2. Add/subtract
3. Put the answer in scientific notation
 | **Multiply #’s in Scientific Notation**1. Multiply decimals
2. Keep the 10 the same
3. Add exponents
4. Make sure answer is in scientific notation

\*lose a decimal, gain an exponent\*gain a decimal, lose an exponent | **Divide #’s in Scientific Notation**1. Divide decimals
2. Keep the 10 the same
3. Subtract exponents
4. Make sure answer is in scientific notation

\*lose a decimal, gain an exponent\*gain a decimal, lose an exponent |
| **Addition Word Problems*** Combined
* Altogether
* increased
* Sum

**Subtraction Word Problems*** Decreased
* Difference
* How many more
* how MUCH greater

 longer wider more | **Unit Rate Words*** Per day
* Each day
* Every day
* A day
* One day
* daily

**Multiplication Word Problems*** Unit rate is GIVEN
* Find the area or volume
* Product

**Division Word Problems*** FIND the unit rate
* How many TIMES greater
 | **Place Value**Ten Thousandths .0001Thousandths .001Hundredths .01Tenths .1Ones 1Tens 10Hundreds 100Thousands 1,000Ten Thousand 10,000Hundred thousand 100,000Millions 1,000,000Billions 1,000,000,000Trillions 1,000,000,000,000 |