

Name _____ Date _____

Power Standard #3

Practice Test



Vocabulary:

1) Powers of Ten

- a. It is the force (push or pull) behind the number 10.
- b. The numbers that result from adding tens.
- c. The numbers that result from multiplying 10 times 1, or 10 times 2, or 10 times, 3 etc.

2) Scientific Notation

- a. A short way to write large numbers. An example would be 59×10^3
- b. A short way to write large numbers. An example would be 5.9×100^3
- c. A short way to write large numbers. An example would be 5.9×10^3

3) Write the word form of the following decimals:

6.7 _____

4.67 _____

37.098 _____

4) Write the regular expanded form of the following decimals:

.28 _____

489.67 _____

2,723.197 _____

5) Write the extended expanded form in the missing place value(s).
Use the fraction form for the last two problems:

$$36.476 = \underline{\quad} \times \underline{\quad} + \underline{\quad} \times 1 + 4 \times (0.1) + 7 \times (0.01) + 6 \times (0.001)$$

$$525.187 = 5 \times 100 + \underline{\quad} \times \underline{\quad} + 5 \times 1 + \underline{\quad} \times \underline{\quad} + 8 \times (0.01) + 7 \times (0.001)$$

$$35.981 = 3 \times \underline{\quad} + \underline{\quad} \times \underline{\quad} + 9 \times (0.1) + \underline{\quad} \times (0.01) + \underline{\quad} \times \underline{\quad}$$

$$56.208 = (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad})$$

$$7.614 = (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad})$$

6) Use < or > or = to compare the following decimals:

$$.65 \underline{\quad} .661$$

$$.81 \underline{\quad} .8$$

$$.2 \underline{\quad} .20$$

$$.5 \underline{\quad} .6$$

$$.100 \underline{\quad} .8$$

$$.2 \underline{\quad} .09$$

$$1.3 \underline{\quad} 1.03$$

$$3.52 \underline{\quad} 3.6$$

$$1.3 \underline{\quad} 1.30$$

$$5.3 \underline{\quad} 5.29$$

$$3.00 \underline{\quad} 3.0$$

$$.29 \underline{\quad} .291$$

$$1. \underline{\quad} 1$$

$$.999 \underline{\quad} 9$$

$$.41 \underline{\quad} .409$$

7) Round the following decimals to the tenths place:

$$.47 = \underline{\hspace{2cm}}$$

$$.464 = \underline{\hspace{2cm}}$$

$$1.03 = \underline{\hspace{2cm}}$$

$$3.95 = \underline{\hspace{2cm}}$$

8) Round the following decimals to the hundredths place:

$.525 = \underline{\hspace{2cm}}$

$.092 = \underline{\hspace{2cm}}$

$4.045 = \underline{\hspace{2cm}}$

$16.005 = \underline{\hspace{2cm}}$

9) Round the following decimals to the thousandths place:

$.6741 = \underline{\hspace{2cm}}$

$1.0155 = \underline{\hspace{2cm}}$

$2.0288 = \underline{\hspace{2cm}}$

$53.9772 = \underline{\hspace{2cm}}$

10) Rounding Decimals Word problems:

In 2009, Rafael Munoz swam the 50 meter butterfly in 22.43 seconds. How fast is his world record to the nearest second?

In 2009, Brazil's Cesar Filho swam the 50 meter freestyle in 20.91 seconds. How fast is his time to the nearest tenth of a second?

Usain holds the world record in the men's 400 meter dash. In 2009, he ran it in 43.18 seconds. Round his time to the nearest tenth of a second.

Round the following three NASCAR lap records:



Round Bill Elliott's 212.809 mph lap at Talladega (1987) to the hundredths place. _____

Round Bill Elliott's 210.364 mph lap at Daytona (1987) to the tenths place. _____

Round Geoffrey Bodine's 197.4788 mph lap at Atlanta (1997) to the thousandths place. _____

11) Powers of Ten:

$$156 \times 10 = \underline{\hspace{2cm}} \quad 5,505 \times 10^2 = \underline{\hspace{2cm}}$$

$$1,445 \times 10 = \underline{\hspace{2cm}} \quad 3.76 \times 10^4 = \underline{\hspace{2cm}}$$

$$1.08 \times 1,000 = \underline{\hspace{2cm}} \quad .998 \times 10^3 = \underline{\hspace{2cm}}$$

$$2,556.14 \div 100 = \underline{\hspace{2cm}} \quad 13.044 \div 10^4 = \underline{\hspace{2cm}}$$

$$782 \div 10,000 = \underline{\hspace{2cm}} \quad 10 \div 10^3 = \underline{\hspace{2cm}}$$

$$7.4 \div 10 = \underline{\hspace{2cm}} \quad 7,972.4 \div 10^5 = \underline{\hspace{2cm}}$$

12) Scientific notation:

Light travels at a speed of 186,000 miles per second. How far can light travel in 5 seconds. Write your answer in scientific notation.

A light year is the *distance* that light travels in one year. One light year is about 9,460,000,000,000 kilometers. Write this distance in scientific notation.

13) Place value:

A number has a 2 in the tenths place. The number also contains a digit that is 100 times the value of the 2 in the tenths place. Which could be the standard form of the number?

- a. 843.526
- b. 23,412.242
- c. 2,926.201
- d. 3,404.624

Which statement below is true about the number 1,444?

- a. The 4 in the ones place is $\frac{1}{10}$ the number in the hundreds place.
- b. The 4 in the hundreds place is $\frac{1}{10}$ the number in the tens place.
- c. The 4 in the ones place is $\frac{1}{100}$ the number in the hundreds place.
- d. The 4 in the tens place is $\frac{1}{100}$ the number in the thousands place

An AC-130 aircraft has a top speed of about 300 mph. A rabbit can travel $\frac{1}{10}$ as fast as the AC-130. How fast can the rabbit travel?

- a. 3 mph
- b. 33 mph
- c. 90 mph
- d. 30 mph

