



CP CHEMISTRY SUMMER ASSIGNMENT

(SHOW YOUR WORK)

Name: _____ **Date:** _____ **Period:** _____

Welcome to your Chemistry summer assignment! This assignment is designed to help you maintain and strengthen your math skills over the break. Here's what you need to do:

The first section is a math review. Work through each section carefully, practicing the concepts and solving the problems as instructed.

If you encounter any difficulties or come across concepts you're unsure about, don't hesitate to seek help. You can reach out to your teacher, classmates, or utilize online resources to clarify your understanding.

If you find that you need more practice on certain topics, take the initiative to seek out additional practice problems or exercises. You can use textbooks, online resources, or math review websites to find supplementary materials. Developing your math abilities over the summer will pay dividends during the school year.

The second section introduces some topics which may be new to you. Watch the instructional videos. Take notes to make sure that you master the topics and that you can use these ideas in the class this fall. Complete the assignment attached with these topics.

At the end of the summer, you will be required to submit your completed math review assignment. Make sure to keep track of your progress and any notes you make along the way.

If you have any questions or need further clarification on the assignment, feel free to reach out to your teacher. Have a productive and enjoyable summer!

Math review

Using a calculator, give the answer for the multiplication and division questions below.

- 1) $5 * 4 =$
- 2) $3 / 6 =$
- 3) $(9 * 14) / (2 * 8) =$
- 4) $308 / (74 * 13) =$
- 5) $((45 / 18) 16) / (32 * 70 / (63 / 12)) =$

Give the decimal of each percent below.

- 1) 50% =
- 2) 42% =
- 3) 9% =
- 4) 137% =

Give the percent of each decimal below.

- 1) 0.63 =
- 2) 0.12 =
- 3) 1.98 =
- 4) 0.04 =

If you have 360 players and 8 teams, what is the proportion of players to teams?

Answer =

If you have 50 plates and 40 cups, what is the ratio of cups to total dishes? Answer =

Using a calculator, give the answer to the exponent below.

1) $3^3 =$

2) $4^6 =$

3) $2^{10} =$

4) $10^4 =$

5) $10^{-3} =$

6) $10^{-6} =$

7) $10^{14} =$

Without a calculator, give the answer to the exponent below.

1) $10^{-2} =$

2) $10^5 =$

3) $10^{-13} =$

4) $10^{11} =$

Give the least common multiple between the combination of numbers below.

1) 3 and 5 =

2) 2 and 4 =

3) 6 and 9 =

4) 36 and 12 =

Solve for the variable Y in the equation below. $18 * 6 = 3 * Y$

Solve for the variable G in the equation below. $(2 * G) / (4 * 8) = 37$

Solve for the variable S in the equation below. $(6 * 14) / (7 * S) = 12 / 8$

SIGNIFICANT FIGURES/SCIENTIFIC NOTATION

Watch the following video(s) and answer the following questions:

<https://www.youtube.com/watch?v=-OocWGxgyZ4&index=5&t=0s&list=PL5wpmHJhOEi-i3V7JYsWcWp0hLqybi5Kt>

<https://www.youtube.com/watch?v=XLY1QXLrMxg&index=6&t=0s&list=PL5wpmHJhOEi-i3V7JYsWcWp0hLqybi5Kt>

<https://youtu.be/os0JO6Vjz0U>

1. Change each of the following numbers into scientific notation:

a. 10,000

b. 0.000157

c. 12,000,000,000

d. 0.000 000 000 000 001 72

e. 453,000

f. 568,200,000,000,000

g. 0.000 000 0810.000 000 000 000
904

h. 7,123

i. 0.004

2. Write out each of the following numbers in long form:

a. 2×10^3

b. 3.5×10^{-5}

c. 9×10^{14}

d. 5.87×10^{-2}

e. 7.1×10^4

f. 5×10^{-6}

g. 9.823×10^{-9}

h. 3.33×10^5

i. 2.6×10^{-4}

j. 8×10^8

3. Find the product for each of the following and write your answer in proper scientific notation. **Calculator use is encouraged.** Practice using the EE button (Exponent Entry button). Click here if you have not used this button before: <https://youtu.be/SvHAp3T8JMQ?feature=shared>

a. $37,000 \times 7,000$

b. 0.0005×0.003

c. $400,000 \times 50,000$

d. $(6 \times 10^{-8}) \times (4 \times 10^{-4})$

e. $(7 \times 10^6) \times (8 \times 10^5)$

f. $10,000,000 \times 0.000\ 005$

g. $30,000 \times 0.0004$

h. $0.000\ 000\ 000\ 05 \times 0.003$

i. $(3 \times 10^{-8}) \times (7 \times 10^6)$

METRIC PREFIXES

Watch the following video(s) and answer the following questions:

https://www.youtube.com/watch?v=ysai7aH6jul&t=0s&index=2&list=PL5wpmHJhOEi_uGI_V8tbHMe-Ep6qyZh-p

1. How many cm are equal to 1.45 m?

2. How many kg are equal to 325 g?

3. How many mL are equal to .0024 L?

4. How many km are equal to 1.55×10^4 m?

5. How many mm are equal to 4.75×10^{-2} m?

6. How many cg are equal to 0.459 kg?

7. How many km are equal to 5,995 dm?

8. How many mg are equal to 450 μg ?

9. How many mm are equal to 0.003 dm?

10. How many ML are equal to 4.567×10^4 mL?

DIMENSIONAL ANALYSIS

Watch the following video(s) and answer the following questions:

https://www.youtube.com/watch?v=ovNfEGHqMKU&t=261s&index=3&list=PL5wpmHJhOEi_uGI_V8tbHMe-Ep6qyZh-p

1. How many g are equal to 345.7 mg?
2. Change 0.00765 kL into mL.
3. How many seconds are there in 2.5 days?
4. How many minutes are there in 1.000 week?
5. How many seconds long is this chemistry class if it lasts 40.0 minutes?

6. A chemistry student's height is measured at 68.5 inches. How tall is the student in cm?

7. This same chemistry student has a weight of 155 lbs. What is the student's weight in grams?
(16oz=1lb, 1 oz = 28.34 g)

8. A homerun in a baseball game was measured at 450 feet. How many meters is this equal to?

9. Mount Everest is approximately 8,000 meters high. How many miles high is Mount Everest?

10. A 5.0 km race is scheduled for this weekend. How many miles is this race?