Class of 2022 Summer Homework

Summer 2020

English

Mary Wertheimer

Summer Homework will be work in Noredink to practice grammar, usage, and punctuation as needed. Juniors are starting with a diagnostic to see what work is most appropriate for this in-coming group. Once the diagnostic is finished, I will assign approximately 4 units for the summer based on what we need to improve. Each unit will have a diagnostic, a practice assignment, and a final quiz. That would be approximately 5 hours of summer homework for English.

The Noredink class is titled as follows: Class of 2022

The link to sign up: https://www.noredink.com/join/awake-planner-19

If you are already in Noredink and just want to add a class, use the code: awake planner 19

SIGN UP FOR THE CLASS BEFORE YOU DO THE DIAGNOSTIC SO THAT I CAN USE THE DATA!

Assignment 1: Summer Homework Diagnostic (can be started 5/26 @3:00 pm) **Due June 5, 2020**

Below is a link to the diagnostic:

https://www.noredink.com/learn/pretests/828867

Assignment 2: Assignment 5 will be posted in Schoology with links to Noredink starting in the week of June 8 and running until July 31. They will be spaced out well enough to give you time to complete them. Be sure to check Schoology and Noredink!

Government

Jake Towner

1. Go to https://www.khanacademy.org/join/UE86WDSB
2. Students can visit **www.khanacademy.org/join** and enter class code **UE86WDSB**.
3. Five lessons will be assigned to you once you join (these each have several videos and articles to watch and read). Each lesson should take about an hour.

4. At the end of each lesson there are questions you need to answer (called exercises). There are also two quizzes to take at various points to show learning. You want to get at least 80% on these quizzes or you need to go back to the recommended lessons at the end of the quiz and go through those again and retake the quiz.

Chemistry

Thess Lee-Alvarez

1. Go to khanacademy.org
2. Enroll in class code: **FZZFB355**
3. Read articles, watch videos and complete exercises/quizzes on Atoms and its history.

Mathematics

Dave Helbling

SHOW ALL WORK (NO WORK, NO CREDIT!) and put UNITS on final answer (if applicable).

Part I: Money Number Sense

1. Art was planning a family reunion. Each person's meal cost $11.50 plus a 15% tip. Thirty-two people attended the party. What was the total cost of the meals plus tip?

2. Mary makes $5.50 per hour for babysitting. She babysat two hours on Friday and four hours on Saturday. How much money did she make?

3. Nadine bought three hair bands and Vivian bought eight hair bands. Each hair band cost 55 cents. How much did the two girls pay for their hair bands?

4. Beau has three dimes, two nickels and five pennies. He wants to buy a hot wheels that costs $0.77. How much money is Beau short?

5. Sarah has $25.00. She bought four markers that cost $2.39 each. How much money does she have left?

6. Ryan bought eight pens at 79 cents each. What is his change if he pays with $10?

7. Sam is earning money to buy a bike. He baled hay for five hours at $9 an hour. The next day he cut lawn for neighbors for a total of nine hours. He charges $8 an hour. Finally, he babysat for thirteen hours at $6 an hour. How much money has Sam earned to buy a bike? What percentage was earned from babysitting?

8. Fred needed $4.20 to buy his friend a gift. He searched through his parents' sofa and found seven quarters, nine dimes, six nickels and seventeen pennies. How much more money does he need for the gift?

9. Alex went shopping for school. She bought nine notebooks at 12 cents each, three pens at $0.37 each, two packages of pencils at $1.45, eight folders at 23 cents each and a pack of markers for $3.79. How much did she spend?

10. Pat won the lottery!! She won 23 million dollars. Of course she had to pay the income tax of 33%. She decides to take the rest in monthly payments for twenty years. How much money will Pat get each month?

Part II: Measurement Number Sense

1. I have three gallons of gas left in my car. I get 24 miles per gallon of gas with my car. I put seven gallons of gas in my car. How many miles can I drive before running out of gas?

2. Selby ate five sugar cookies. Each cookie is 225 calories. How many calories did she consume? If she is on a 2,500 calorie diet, how many more calories can she consume that day?

3. Richard has 1 ½ feet of aluminum wire, 1.29 feet of copper wire, and 1 ¾ feet of steel wire. How much wire does he have all together?

4. Zelda ran two miles on Monday (total time was 12 ½ minutes) and six miles on Tuesday (total time was 42 ¼ minutes).

   a) What is the average mileage she ran on those two days?

   b) What is the average time per mile for those two days?

5. Denise's car gets 20 miles per gallon. She drives a total of 48 miles every day to and from work. Gas costs $1.96 per gallon. How much will Denise spend on gas for a five day work week?

6. Glen's new house has five rooms and a hallway. The bedroom is 12ft X 13 ft. The kitchen is 15ft X 16ft. The living room is 11ft X 14 ft. The office and bathroom are both 8ft X 14 ft. Finally the hallway is 3ft X 12 ft. How many square feet are in his new house? The bedroom represents what percentage of the overall square footage?

7. Frank wants to become an actor in Hollywood, but he needs money to travel from Green Bay, Wisconsin. He can fly for $175 or he could drive his car. His car contains a 17-gallon gas tank. His car gets 30 miles per gallon. It is 2,100 miles from Green Bay to Hollywood. The price of gas is $1.94 a gallon. Would it be cheaper for him to fly or drive? How much cheaper?

8. Mike is making a pen for his dog. He wants the pen to be 10x24 feet. Fencing costs $5.59 per foot.

   a) How much will Mike's fence cost?

   b) Mike wants to put gravel on the ground inside the dog pen. One bag covers 20 square feet. Bags of gravel cost $12.79 a bag. How much will he spend on gravel?

9. A can of soda is 12 ounces. They were on sale for 50 cents for 2 cans. If Tim bought $6.00 worth of soda, how many ounces would he get?

10. The perimeter of a rectangle is 40 inches. The length is 6 inches longer than the width.

    a) What are the length and width of the rectangle?

    b) Find the length of the diagonal of the rectangle.

    c) Find the area of the rectangle.

    d) A circle has an area that is 50% greater than this rectangle. Find the length of the diameter of the circle.

Part III: Large Numbers Number Sense

1. Write out each number. Make sure to place commas correctly.

    a) 2.7 million

    b) 4.8 billion

    c) 7.9 trillion

    d) .68 million

2. How much is one million?

    a) The distance across the USA is approximately 2,800 miles. How many trips across the USA does it take to equal one million miles?

    b) Suppose you drive at a constant speed of 70 miles per hour. How many hours will it take to travel across the USA?

3. How much is one billion?

    a) How many seconds are in one day?

    b) One billion seconds is equivalent to how many days?

    c) One billion seconds is equivalent to how many years?

4. How much is one trillion?

    a) The distance from earth to the moon is 238,900 miles. Find the roundtrip distance for earth to moon.

    b) How many roundtrips from earth to moon would it take to travel one trillion miles?

5. Lebron James' NBA salary is 37.44 million dollars. He plays 82 games (excluding playoffs) in a season.

    a) How much (gross pay) does Lebron earn each game?

    b) Lebron's NET PAY is approximately 62% of the 37.44 million dollars. Find Lebron's NET PAY.

6. The population of the world is approximately 7.6 billion people.

    a) Suppose the 7.6 billion people were all in the USA. The area of the USA is 3.8 million square miles. Each person gets the same area of space. How many square miles of the USA does each person in the world get?

    b) Find the dimensions of the square for your answer to part a.

7. The coronavirus relief bill passed by Congress cost American taxpayers 2 trillion dollars.

    a) Suppose each American (population is 328 million) was given the same amount of money. How much will each American receive?

    b) Suppose instead each American 18 or older is given $10,000. The percentage of Americans 18 or older is approximately 78%. How much will this cost?

Part IV: Solving Equations

Find all solutions for each equation. Show algebra.

1. $B^2 + B = 2$

2. $75 = 3(-6n - 5)$

3. $5 = \sqrt{r - 3} - 3$

4. $(n - 27)^{3/2} = 64$

5. $-3 = (37 - 3n)^{1/2} - n$

6. $3x^2 - 8x = 16$

7. $9 + \sqrt[3]{y + 2} = 4$

8. $p^2 = 36$

9. $10p + 9 - 11 - p = -2(2p + 4) - 3(2p - 2)$

10. A sugar solution was made by mixing 7 ml of a 50% sugar solution and 3 ml of an 80% sugar solution. Find the concentration of the new mixture.

Part V: Random problems

1. Find the distance between (-3,5) and (2,-4).

2. A car travels 60 mph for 4 hours and 70 mph for 2 ½ hours.

   a) Find total distance traveled.

   b) Find average speed for trip.

3. Find the volume and surface area of a cylinder with height of 8 inches and diameter of 5 inches.

4. BB earns $12.76 per hour. BB works 37 hours one week.

   a) Find BB's weekly earnings.

   b) BB has 17.4% percent of weekly earnings deducted for taxes. Find amount deducted for taxes.

5. A college professor gives three assessments. Test 1 counts for 40% of final grade, Test 2 counts for 40% of final grade and Test 3 counts for 20% of final grade. JJ earned an 84% on Test 1, 93% on Test 2 and 91% on Test 3. Find JJ's final grade.

6. A circle has a diameter of 9 inches. Find the area and circumference of the circle.

7. Find the slope of the line that passes through (4,-6) and (-1,4).

8. Solve $4x + 2y = 18$ for y.

9. WW spent $8.76 at the candy store. Part of WW's purchase was 7 root beer barrels. Each root beer barrel cost 17 cents. What percent of WW's order was spent on root beer barrels?

10. The length of a TI-84 graphing calculator is 7 inches. How many calculators, laid end to end, does it take to reach exactly one mile?