

## Waring School Summer Math Packet

*for all students entering Core - 6th Grade*

Hello folks,

And an early welcome to Waring! We are very glad you will be joining us!

Here is a packet of problems for you to ponder and work on over the summer, in order to keep your math skills fresh. Try all of the problems, and on your own paper (lined or graph paper), please write up your solutions. This means not just writing your answers, but showing your steps and your thinking! This is the work you will hand in during the first week of classes.

We have included a suggested pacing of one to two pages per week this summer. The problems have been arranged by topics, so you should aim to work on one topic per week.

We math teachers want to acknowledge that you all are coming off a challenging school year and trying to learn during the pandemic. Most people have lost class time over the past year, and we expect different people will be uncertain about different things. **So our message to you is - please just do your best!** And make note of ideas that feel unfamiliar to you. That will help us in the fall address any learning gaps you may have! We are all in this together - and we will figure it out together as well. We so appreciate your willingness to spend some time doing math this summer!

*“What kind of calculator do I need to do this work?”*

No calculators necessary--just use your brain! :)

*“I don’t know the answers to some of these!”*

That’s OK! You aren’t supposed to be perfect and may not yet know how to do all of these problems. This is school, after all, and we are all learning. Check out our [FAQ and Resources](#) for resources on what to do if you feel stuck.

If you have questions about specific problems, or anything else in this packet, you can look at our page, or E-mail teacher Anton Fleissner at [afleissner@waringschool.org](mailto:afleissner@waringschool.org) or our department chair Joan Sullivan at [jsullivan@waringschool.org](mailto:jsullivan@waringschool.org).

We hope you and your family have a good summer,  
*The Waring Math Teaching Team*

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## Numbers and Place Value (week 1)

Please write the number name in words:

1. 6,003
2. 560.8
3. 3,005,600.07

Please write the digits for each number name:

4. Forty-five thousandths
5. Six hundred fifty-three and one tenth
6. Five million, three hundred thousand, twenty-nine and six tenths

Please round...

7. 3.1833 to the nearest tenth
8. 13,621.3564 to the nearest thousandth

Please write the place value of the digit "2" in each of the following numbers. (For example, in 23.15, the digit "2" is in the tens place.)

9. 32 \_\_\_\_\_
10. 205 \_\_\_\_\_

11. 1.2 \_\_\_\_\_

12. 0.02 \_\_\_\_\_

Please order each list of numbers from least to greatest:

13. 20, 4, 0.6, 0.08

14. 246.8, 248.6, 244.9, 246.5

15. 4, 0.006, 0.8, 0.07

16. 297, 3.456, 64.4, 7.24

Please fill in each blank with a <, >, or = symbol:

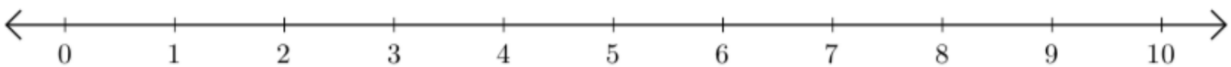
17. 5.0 \_\_\_\_\_ 0.5

18.  $(6 - 3) \times 2$  \_\_\_\_\_  $6 - 3 \times 2$

19.  $\frac{20}{15}$  \_\_\_\_\_  $\frac{3}{2}$

Now please place each of the numbers on the number line below:

20. 0.6,  $\frac{5}{6}$ ,  $\frac{6}{2}$ , 6.5



**Adding and Subtracting Whole Numbers (week 2)**

All of these can be answered without a calculator!

1.  $6,496 + 3,288 =$

2.  $54,398 + 64,508 =$

3.  $754 - 549 =$

4.  $98,455 - 14,789 =$

5. Subtract 57 from 302.

6. Add 908 and 774.

7. Find the missing number:  $213 + \underline{\hspace{2cm}} = 1,001$

8.  $24 \div 3 =$

9.  $24 \times 6 =$

10.  $16 \times 15 =$

11.  $56 \div 7 =$

12.  $99 \times 10 =$

13.  $190 \div 19 =$

14.  $32 \div 2 =$

15.  $79 \times 9 =$

16.  $324 \div 12 =$

17.  $4 \times 58 =$

18.  $414 \times 77 =$

Write these two as [quotient] R [remainder]. :)

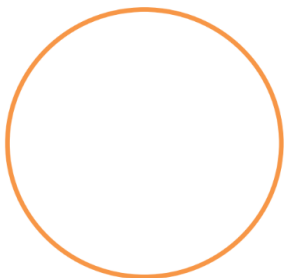
19.  $114 \div 14 =$

20.  $1,240 \div 56 =$

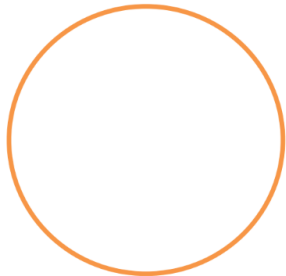
**Operations with Fractions (week 3)**

Please split and shade each circle below to represent the given fractions. (One circle represents the number 1.)

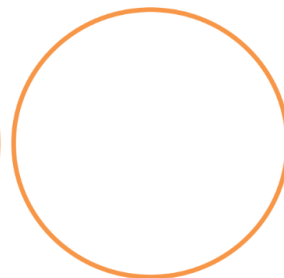
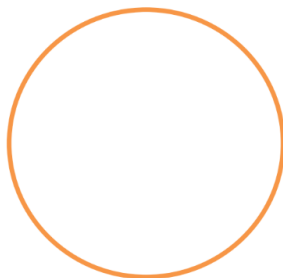
1.)  $\frac{4}{5}$



2.)  $\frac{7}{8}$



3.)  $\frac{5}{4}$



Now please compute without a calculator! (Use your brain--you can do it!) :)

4.  $\frac{1}{2} + \frac{3}{4} =$

5.  $\frac{5}{10} - \frac{1}{2} =$

6.  $\frac{5}{8} - \frac{3}{4} =$

7.  $\frac{3}{4} + \frac{2}{8} =$

8.  $\frac{7}{3} + \frac{1}{3} =$

9.  $\frac{20}{50} + \frac{1}{5} =$

10.  $\frac{1}{2} \times \frac{3}{4} =$

11.  $\frac{5}{10} \times 2 =$

12.  $\frac{4}{7} \div 2 =$

13.  $\frac{1}{3} \div \frac{1}{2} =$

**Modeling with Fractions (week 4)**

1. Suppose 7 out of 10 people eat out at least once a week. How many people would you expect to eat out once a week in a group of 1,000 people?

2. Suppose  $a$  and  $b$  are related by the equation  $a = b \div 3$ . Please complete the chart of values below:

$a$	1	3	5	$\frac{1}{3}$
$b$				

3. Using only the numbers below, make all the fractions you can that are equal to  $\frac{1}{2}$ .

6, 7, 9, 10, 12, 15, 18, 19, 20, 23, 24

4. What fraction of one hour is 10 minutes?



5. The stars below are  $\frac{2}{3}$  of the total number of stars. Please draw in the rest to make 100% of the stars.



6. Lucy loves books. She has half as many nonfiction books as fiction books. She has 48 books in all. How many nonfiction books does she have?
7. On a hiking trip, Brad walked about 150 kilometers. To the nearest mile, how far did he walk? (A kilometer is about  $\frac{5}{8}$  mile.)
8. Wilhelmina and Gigi went out to lunch. Their bill was \$22.42. If they leave a tip of 20%, how much will each pay if they equally divide the total amount?

**Operations with Decimals (week 5)**

Here too, these can be solved without a calculator!

1.  $15.7 + 2.34 + 5.06 =$

2.  $64.038 + 164.8 + 15.7 =$

3.  $2.6 + 64.89 + 4.007 =$

4.  $5.908 - 4.72 =$

5.  $87.4 - 56.09 =$

6.  $955.3 - 242.7 =$

Please round each of the following numbers to the *tenths* place:

7. 3.21 \_\_\_\_\_

8. 1.234 \_\_\_\_\_

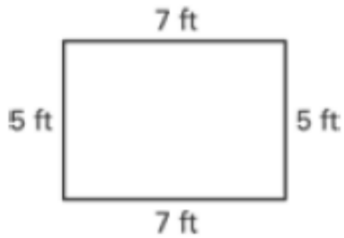
9. 200.067 \_\_\_\_\_

10. 3.11 \_\_\_\_\_

11. What is the value of  $3.14 \times 6$  ?

### Geometry (week 6)

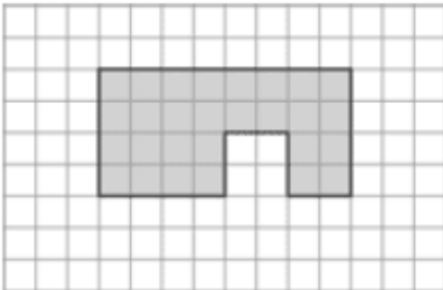
1. Please find the perimeter and area of the figures below:



perimeter: \_\_\_\_\_

area: \_\_\_\_\_

(Don't forget to include units!)



perimeter: \_\_\_\_\_

area: \_\_\_\_\_

(Don't forget to include units!)

2. Avery needs to know if the volume of a storage bin is less than 3,000 cubic feet. The bin's dimensions are 17 ft x 15 ft x 10 ft.

Is the bin's volume less than 3,000 cubic feet? \_\_\_\_\_

By how much is it over or under?

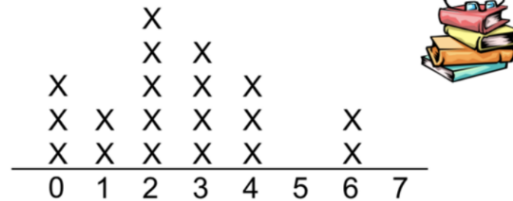
3. Please sketch a rectangle, a square, and a parallelogram.

How are these shapes related to each other? How are they similar and how are they different?

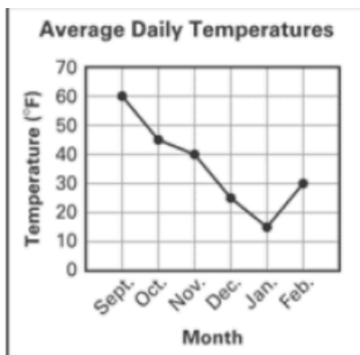
**Data (week 7)**

4. Students were surveyed about how many books they read over the summer; the results of this survey are shown below.

How many books did you read over the summer?



- a. How many students were surveyed in all? \_\_\_\_\_
  - b. How many students read at least one book? \_\_\_\_\_
  - c. How many students didn't read any books? \_\_\_\_\_
  - d. How many books were read in all? \_\_\_\_\_
  - e. To the nearest tenth, what was the average number of books read? \_\_\_\_\_
5. The graph below shows the average daily temperature across six months.



In which month was the average daily temperature the lowest?

What is the difference between the average daily temperatures for November and December?

What was the average daily temperature for October?

6. Please find the mean, median, and mode of the values in the data set below:

2, 7, 4, 11, 12, 4, 6, 0