

Math Summer Work

EVCS Grade 5

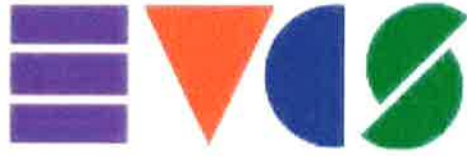
Hello summer! You have worked very hard in 5th grade learning new math skills and perfecting older ones. In order to keep your math skills sharp, you will have a summer math assignment to work on over the next two months so that you are ready to jump into 6th grade math next year!

Must Do: Complete all of the pages in this packet and return them to your teacher during the first week of school in September. Make sure to show your work! If you do a problem every day or two, this assignment will be completed in no time! 😊

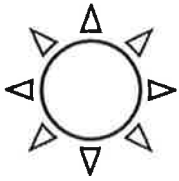
May Do: Use the following websites for additional practice:

- Zearn
- Prodigy
- MobyMax

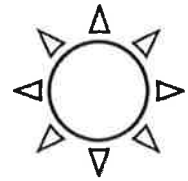
Have a safe, happy, and relaxing summer!



ELMWOOD VILLAGE
CHARTER SCHOOLS



Summer Math Work
Students Entering 6th Grade



Directions: Solve problems 1 – 30 in the provided boxes. Show your work. Make sure to review the steps and example problems before you solve.

Name: _____

Multiplying Whole Numbers

1. Write the problem vertically
2. Multiply the ones digit of the bottom number by each of the digits in the top number, right to left
3. Bring down a zero and then multiply the tens digit of the bottom number by each digit in the top number, right to left
4. Bring down two zeros and repeat with the hundreds digit of the bottom number
5. Add up all of the products

ex: $3,481 \times 142$

$$\begin{array}{r} ^1 ^1 ^3 \\ 3,481 \\ \times 142 \\ \hline 6962 \\ + 139240 \\ + 348100 \\ \hline \boxed{494,302} \end{array}$$

Find each product. Show your work.

1. $238 \times 5 = \underline{\hspace{2cm}}$

2. $19 \times 863 = \underline{\hspace{2cm}}$

3. A candy factory can produce 2,345 chocolate bars each day. If there are 14 candy factories in New York, how many chocolate bars do they produce each day?

Dividing Whole Numbers

1. Write out the long division problem with the first number (dividend) underneath the division symbol and the second number (divisor) to the left of the division symbol
2. Divide the divisor into the smallest part of the dividend it can go into and write the number of times it can go in on top of the division symbol
3. Multiply the number on top by the divisor and write the product under the number you divided into in step 2
4. Subtract your product from the number above it
5. Bring down the next digit of the dividend
6. Repeat steps 2-5 until there is nothing left to bring down.
7. If your last subtraction answer is not zero, write the remainder on top

ex: $6,425 \div 21$

$$\begin{array}{r}
 \boxed{305 \text{ R}20} \\
 21 \overline{)6425} \\
 \underline{-63} \\
 12 \\
 \underline{-12} \\
 0 \\
 \underline{-12} \\
 105 \\
 \underline{-105} \\
 20
 \end{array}$$

Find each quotient. Show your work.

<p>4. $408 \div 24 =$ _____</p>	<p>5. $1,065 \div 15 =$ _____</p>
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Solve the word problem. Show all your work.

<p>6. Mr. M bought 5 boxes of pencils to give to his students. If he has 36 students in his class, how many pencils can he give each student? How many pencils will he have left over?</p>	
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Rounding with Whole Numbers & Decimals

—	—	—	—	—	—	—	—	—
ten-thousands	thousands	hundreds	tens	ones	tenths	hundredths	thousandths	

1. Keep all digits to the left of the place you are rounding the same
 2. If the digit to the right of the rounding digit is less than 5, keep the rounding digit the same. If it's 5 or greater, increase the rounding digit by 1.
 3. Change all places to the right of the digit you are rounding to 0. (Trailing zeros after the decimal are unnecessary)

ex: round 52.943 to the nearest tenth

52.943

less than 5, so the 9 stays the same

52.900

don't need trailing zeros after the decimal

52.9

7. Round the number 498.2536 to the nearest indicated place.

tenth	hundred	thousandth	one
_____	_____	_____	_____

Word Form & Expanded Form

<p>1. <u>Word Form</u>: write the whole number in word form, translate the decimal to "and", & write the decimal as if it were a whole number, followed by the name of the place of the last digit</p> <p>2. <u>Expanded Form</u>: write the value of each non-zero digit separately, with addition signs between them</p>	<p>ex: 209.315</p> <div style="border: 1px solid gray; padding: 5px; margin: 5px;">two hundred nine and three hundred fifteen thousandths</div> <div style="border: 1px solid gray; padding: 5px; margin: 5px;">$200 + 9 + 0.3 + 0.01 + 0.005$</div>
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8. Complete the chart below.

Standard Form	Expanded Form	Word Form
3.962		
	$100 + 2 + 0.09$	

Comparing & Ordering Decimals

<ol style="list-style-type: none"> 1. Compare the whole number portions of the numbers. If they are different write $>$ for greater than or $<$ for less than. 2. If the whole numbers are the same, compare each digit to the right of the decimal point, one at a time until you find digits that are different. (If necessary, add zeros at the end of a decimal.) 	<p>ex: $13.702 \bigcirc 13.74$</p> <p style="margin-left: 40px;">$13 = 13$</p> <p style="margin-left: 40px;">$13.7 = 13.7$</p> <p style="margin-left: 40px;">$13.70 < 13.74$</p> <p style="margin-left: 40px;">So, $13.702 < 13.74$</p>
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9. Compare the numbers by writing $>$, $<$, or $=$ in the provided circle.

$0.046 \bigcirc 0.13$	$24.13 \bigcirc 24.130$	$32.9 \bigcirc 3.290$
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10. Order the numbers from least to greatest.

$6.86 \quad 6.8 \quad 7 \quad 6.9 \quad 6.827$

11. Order the numbers from greatest to least.

$12.03 \quad 1.2 \quad 12.3 \quad 1.203 \quad 12.301$

Adding & Subtracting Decimals

<ol style="list-style-type: none"> 1. Write the problem vertically, lining up the decimal points 2. Add zeros, if necessary 3. Add or subtract the numbers as if they were whole numbers 4. Bring the decimal point straight down 	<p>ex: $12.8 - 1.52$</p> $ \begin{array}{r} 12.\overset{7}{8}\overset{1}{0} \\ - \quad 1.52 \\ \hline 11.\overset{7}{2}8 \end{array} $
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Find each sum or difference. Show your work.

12. $8.74 + 10.36 =$ _____	13. $14.76 - 9.8 =$ _____
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Multiplying Decimals

<ol style="list-style-type: none">1. Write the problem vertically with the numbers lined up to the right (decimals do NOT need to be lined up)2. Ignore the decimal points and multiply the numbers as if they were whole numbers3. Count the total number of decimal places in the two factors and put a decimal point in the product so that it has that same number of decimal places	<p>ex: 3.24×0.8</p> $\begin{array}{r} 3.24 \\ \times 0.8 \\ \hline 2592 \end{array}$ <p>2 decimal places + 1 decimal place ----- 3 decimal places</p> <p>↓</p> <p><u>2.592</u></p>
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Find each product. Show your work.

14. $8.9 \times 2.5 =$ _____	15. $14.8 \times 0.12 =$ _____
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Dividing Decimals

1. Write the dividend under the division symbol and the divisor in front of the division symbol
2. Move the decimal in the divisor after the number and then move the decimal in the dividend the same number of places and bring it up
3. Ignore the decimal point and divide as if whole numbers
4. If there is a remainder, add a zero to the end of the dividend, bring it down, and then continue dividing until there is no remainder

ex: $32.3 \div 0.5$

$$\begin{array}{r}
 \boxed{64.6} \\
 0.5 \overline{) 32.3 \uparrow 0} \\
 \underline{-30} \\
 23 \\
 \underline{-20} \\
 30 \\
 \underline{-30} \\
 0
 \end{array}$$

Find each quotient. Show your work.

16. $144.8 \div 4 =$ _____

17. $71.5 \div 0.5 =$ _____

18. Three friends went out to lunch. The bill came to \$47.31. If they split the bill evenly, how much money does each friend owe?

Adding & Subtracting Fractions

<ol style="list-style-type: none"> 1. Rename the fractions to equivalent fractions with common denominators 2. Add or subtract the numerators and keep the denominator the same 3. If mixed numbers, add or subtract the whole numbers 4. If possible, simplify the answer & change improper fractions to mixed numbers 	<p>ex: $4\frac{4}{9} + \frac{2}{3}$</p> $ \begin{array}{r} 4\frac{4}{9} \quad \times \frac{1}{1} \quad \frac{4}{9} \\ + \quad \frac{2}{3} \quad \times \frac{3}{3} \quad \frac{6}{9} \\ \hline 4 \quad \frac{10}{9} = \boxed{5 \frac{1}{9}} \end{array} $
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19. Find each sum Show your work.

$\frac{3}{8} + \frac{1}{4} = \underline{\hspace{2cm}}$	$4\frac{5}{9} + 7\frac{1}{3} = \underline{\hspace{2cm}}$
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20. Find each difference. Show your work.

$\frac{9}{10} - \frac{1}{2} = \underline{\hspace{2cm}}$	$12\frac{9}{14} - 9\frac{3}{7} = \underline{\hspace{2cm}}$
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Multiplying Fractions

1. Turn a whole number into a fraction by giving it a denominator of 1
2. Cross-simplify the fractions if possible
3. Multiply the 2 numerators and the 2 denominators
4. If possible, simplify the answer & change improper fractions to mixed numbers

ex: $6 \times \frac{2}{3}$

$$\frac{\overset{2}{\cancel{6}}}{1} \times \frac{2}{\underset{1}{\cancel{3}}} = \frac{4}{1}$$

$$= \boxed{4}$$

21. Find each product. Show your work.

$$\frac{1}{6} \times \frac{3}{4} = \underline{\hspace{2cm}}$$

$$15 \times \frac{2}{3} = \underline{\hspace{2cm}}$$

Dividing Fractions

1. Turn a whole number into a fraction by giving it a denominator of 1
2. Keep the 1st fraction the same, change the division symbol to multiplication, and flip the 2nd fraction to its reciprocal
3. Multiply the 2 fractions
4. If possible, simplify the answer & change improper fractions to mixed numbers

ex: $12 \div \frac{1}{2}$

$$\frac{12}{1} \div \frac{1}{2}$$

$$\frac{12}{1} \times \frac{2}{1} = \frac{24}{1} = \boxed{24}$$

You can also draw tape diagrams to solve fraction division problems.

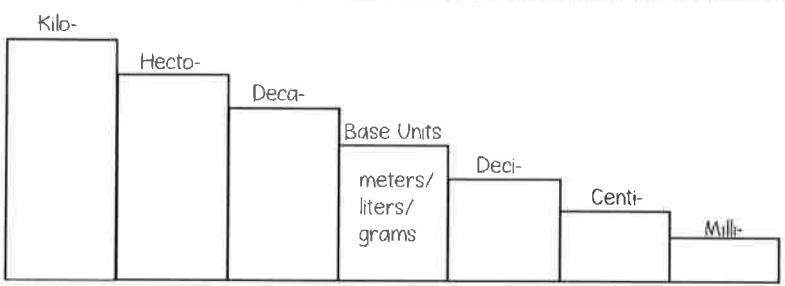
22. Find each quotient. Show your work.

$\frac{1}{2} \div 4 = \underline{\hspace{2cm}}$	$6 \div \frac{1}{3} = \underline{\hspace{2cm}}$
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Solve each word problem. Show your work.

<p>23. Tyrell gave 3 packs of baseball cards to his friends. He gave each friend $\frac{1}{3}$ of a pack. How many friends got baseball cards?</p>	
<p>24. Alana ran $1\frac{1}{2}$ miles on Monday, Wednesday, and Friday. She ran $\frac{3}{4}$ mile on Tuesday and Thursday. How far did she run in all?</p>	

The Metric System



The chart shows six steps of the metric system from largest to smallest: Kilo-, Hecto-, Deca-, Base Units (meters/liters/grams), Deci-, Centi-, and Milli-.

ex: $23 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$

going from base unit step to centi- step, so need to move the decimal 2 places right

$23.\underline{00}$
= $\boxed{2,300 \text{ cm}}$

Determine the direction and count the number of steps it takes to get from the starting unit to the unit you are converting to and move the decimal point the same number of places in that direction.

25. Convert each Metric measurement. Show your work.

$1.9 \text{ km} = \underline{\hspace{2cm}} \text{ m}$	$350 \text{ mL} = \underline{\hspace{2cm}} \text{ kL}$	$6 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$
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The Customary System

Length	Weight	Capacity
1 ft = 12 in	1 lb = 16 oz	1 c = 8 fl oz
1 yd = 3 ft	1 T = 2,000 lb	1 pt = 2 c
1 mi = 5,280 ft		1 qt = 2 pt
		1 gal = 4 qt

ex: $18 \text{ c} = \underline{\hspace{2cm}} \text{ pt}$

cups are smaller units of measure than pints, so need to divide

$18 \div 2 = \boxed{9 \text{ pints}}$

To convert from a larger unit to a smaller unit, multiply. To convert from a smaller unit to a larger unit, divide.

26. Convert each customary measurement. Show your work.

$48 \text{ in} = \underline{\hspace{2cm}} \text{ ft}$	$8 \text{ pt} = \underline{\hspace{2cm}} \text{ c}$	$3 \text{ T} = \underline{\hspace{2cm}} \text{ lb}$
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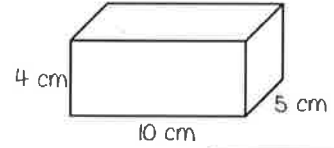
Volume

Volume is the number of cubic units inside a figure.

Volume of Rectangular Prism = length x width x height

Volume of Irregular Figure: count cubic units

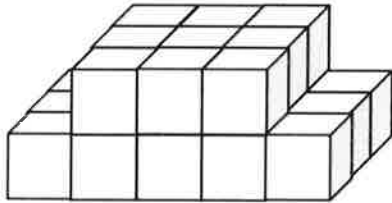
ex: find the volume



$$V = 4 \times 10 \times 5 = 200 \text{ cm}^3$$

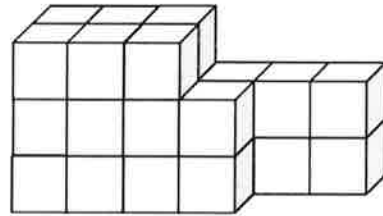
Find the volume of each figure. Show your work.

27.



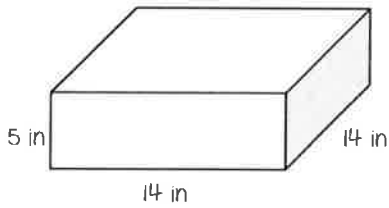
Volume = _____

28.



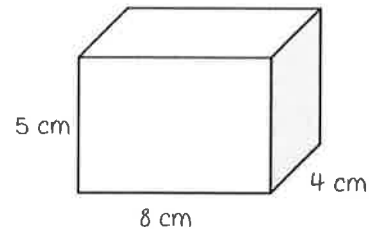
Volume = _____

29.



Volume = _____

30.



Volume = _____