Name _____

5th Grade Math Summer Learning Packet

Parents/Guardians please note that this Summer Learning Packet is also available on our website at www.brighterchoice.org under the heading "Remote Learning." All assignments within this packet are to help scholars retain what has been taught the 2020-2021 school year. This packet can be returned at the beginning of next school year for a prize if completed in its entirety. We thank you greatly for your continued support.

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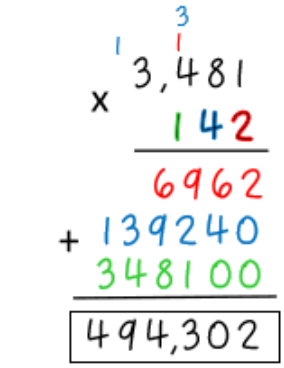
Multiplying Whole Numbers

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 x 142



Find each product. Show your work.

1. 238 x 5	2. 832 x 156	3. ,899 x 67	4. 756 x 300
5. 19 x 863	6. 188 x 732	7. ,249 x 173	8. 609 x 840

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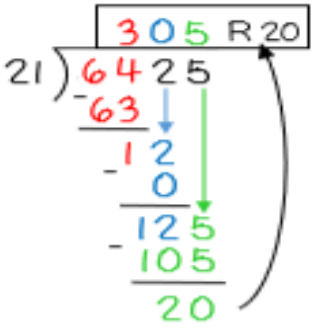
Dividing Whole Numbers

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 ÷ 21



Find each quotient. Show your work.

876 ÷ 2	9,473 ÷ 5	396 ÷ 24	8,911 ÷ 45
700 ÷ 12	1,065 ÷ 15	2,737 ÷ 305	4,516 ÷ 22

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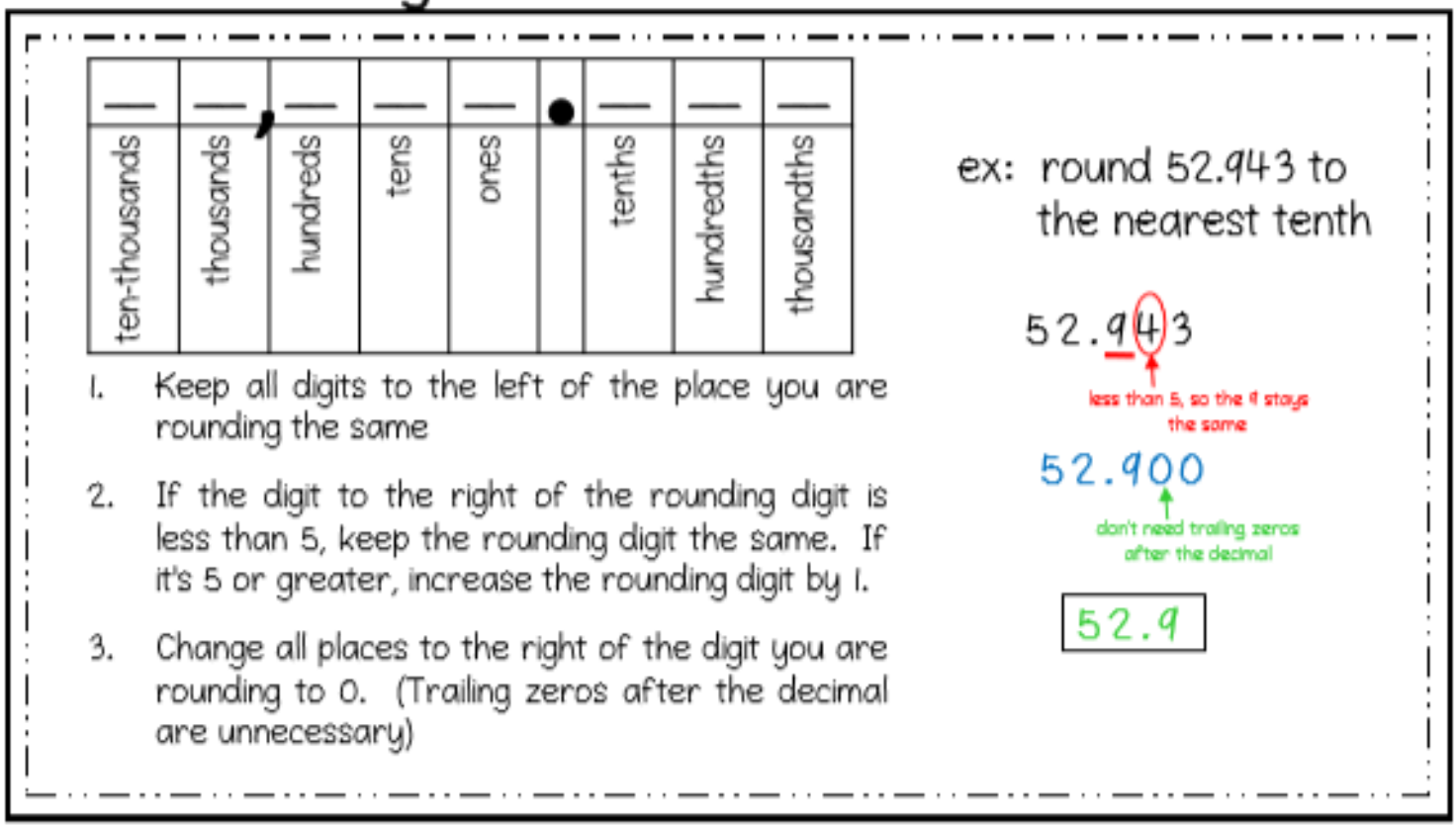
Rounding with Whole Numbers & Decimals



Round the number 21,498.2536 to the nearest indicated place.

tenth	hundred	thousandth	one
thousand	hundredth	ten	ten-thousand

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Word Form & Expanded Form

1. Word Form: 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

ex: 209.315

two hundred nine and three hundred fifteen thousandths

2. Expanded Form: write the value of each non-zero digit separately, with addition signs between them

200 + 9 + 0.3 + 0.01 + 0.005

Complete the chart below.

Standard Form	Expanded Form	Word Form
3.962		
	100 + 2 + 0.09	
		Five thousand six hundred eighty-five and twelve hundredths
8,770.006		
	900 + 10 + 4 + 0.3 + 0.02 + 0.008	
		Two thousand nine and thirty-five thousandths

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Comparing & Ordering Decimals

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.)

ex: 13.702 ◯ 13.74

13 = 13

13.7 = 13.7

13.70 < 13.74

So, 13.702 < 13.74

Compare each pair of numbers by writing <, >, or = in the provided circle.

0.046 ◯ 0.13	9.52 ◯ 90.13	24.13 ◯ 24.130	15.96 ◯ 15.906
0.964 ◯ 1	6.83 ◯ 6.825	7.256 ◯ 7.24	32.9 ◯ 3.290

Order the numbers from least to greatest.

6.86, 6.8, 7, 6.9, 6.827	12.03, 1.2, 12.3, 1.203, 12.301

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Adding & Subtracting Decimals

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

ex: 12.8 - 1.52

$$\begin{array}{r} 12.\overset{7}{\cancel{8}}\overset{1}{0} \\ -\ \ 1.52 \\ \hline 11.28 \end{array}$$

Find each sum or difference. Show your work.

8.74 + 10.36	37.4 – 8.55	12.9 + 105.67	450.89 – 213.33
24.1 + 3.74	14.76 – 9.8	622.85 + 53.49	67 – 14.06

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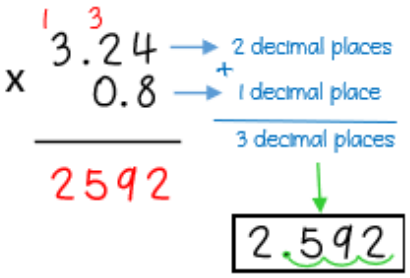
Multiplying Decimals

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 numbers
3. 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

ex: 3.24 x 0.8



Find each product or quotient. Show your work.

4.5 x 6	144.8 ÷ 4	2.7 x 0.8	6.2 ÷ 0.04
8.9 x 2.5	15.8 ÷ 0.5	14.8 x 0.12	16.2 ÷ 1.2

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Adding & Subtracting Fractions

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

ex: $4\frac{4}{9} + \frac{2}{3}$

$4\frac{4}{9} \overset{\times 1}{\underset{\times 1}{=}} \frac{4}{9}$

$+ \quad \frac{2}{3} \overset{\times 3}{\underset{\times 3}{=}} \frac{6}{9}$

$4 \quad \frac{10}{9} = 5\frac{1}{9}$

Find each sum or difference. Show your work.

$\frac{7}{8} + \frac{5}{6}$	$\frac{9}{10} - \frac{1}{2}$	$\frac{3}{11} + \frac{2}{3}$	$\frac{11}{12} - \frac{13}{18}$
$4\frac{5}{9} + 7\frac{1}{3}$	$12\frac{9}{14} - 9\frac{3}{7}$	$3\frac{3}{5} + 2\frac{3}{4}$	$2\frac{2}{15} - 1\frac{2}{3}$

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

$\frac{\cancel{6}^{2}}{1} \times \frac{2}{\cancel{3}_{1}} = \frac{4}{1}$

$= \boxed{4}$

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

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

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

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Find each product or quotient. Show your work.

$\frac{1}{6} \times \frac{3}{4}$	$6 \div \frac{1}{3}$	$15 \times \frac{2}{3}$	$\frac{1}{2} \div 3$
$\frac{1}{6} \times 10$	$\frac{1}{4} \div 2$	$\frac{5}{9} \times \frac{3}{20}$	$4 \div \frac{1}{5}$

Solve each problem, showing all work.

Jacqui ran $1\ 1/2$ miles on Monday, Wednesday, and Friday and $3/4$ mile on Tuesday and Thursday. How far did she run in all?	Tyrell gave 3 packs of baseball cards to his friends. He gave each friend $1/3$ of a pack. How many friends got baseball cards?

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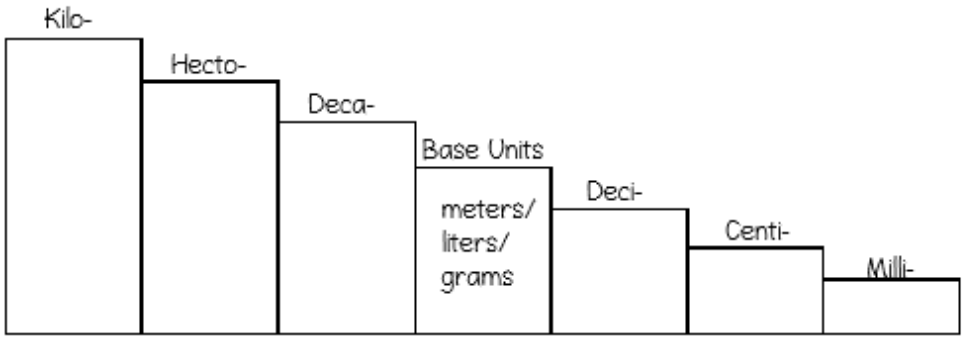
The Metric System



ex: 23 m = ____ cm

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

23.00

= 2,300 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.

Convert each Metric measurement. Show your work.

1.9 km = _____ m	23 g = _____ mg	350 mℓ = _____ kℓ
0.07 kg = _____ cg	6 cm = _____ m	35 mℓ = _____ ℓ

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The Customary System

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

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

ex: 18 c = ____ pt

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

18 ÷ 2 = 9 pints

Convert each Customary measurement. Show your work.

48 in = _____ ft	6 pt = _____ c	3 T = _____ lb
1.5 mi = _____ ft	32 pt = _____ gal	32 oz = _____lb

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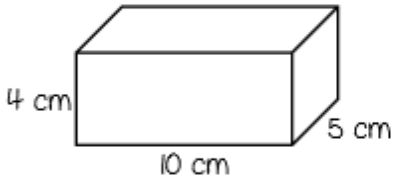
Volume

Volume is the number of cubic units inside a figure.

Volume of Rectangular Prism = length x width x height

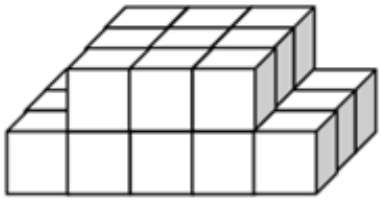
Volume of Irregular Figure: count cubic units

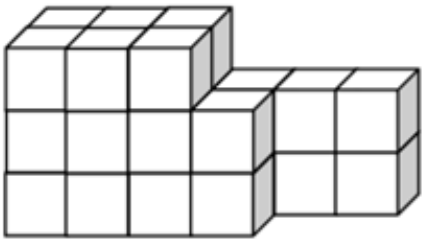
ex: find the volume

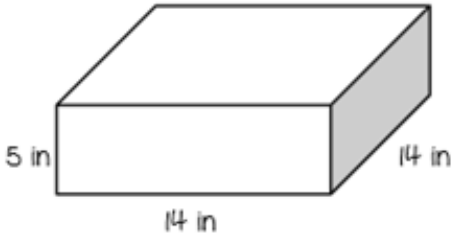


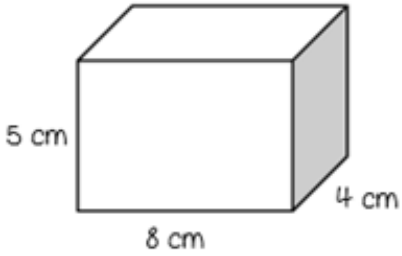
$V = 4 \times 10 \times 5 = 200\ cm^3$

Find the volume of each figure. Show your work.









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WRITING EXPRESSIONS

Write an expression to represent each verbal phrase.

Subtract 9 and 2, then multiply by 4.	Divide 8 by 2 and then add 1.	Triple 4 and then add 6.
Add 2 and 8 and then multiply by 2.	Double 6 and then divide by 3.	Add 4, 6 and 13.
Subtract 9 and 2 and add 5.	4 plus the product of 2 and 7.	The sum of 6 times 5 and 9 minus 2.
8 less than the quotient of 20 and 5.	The product of 4 and triple the number 2.	Multiply 5 and 7 and then divide by 5.

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SEQUENCES OF NUMBERS

Use the rule "add 2" to create a sequence of 5 numbers starting with 8	Use the rule "subtract 2" to create sequence of 5 number starting with 8.
Use the rule "divide by 2" to create a sequence of 4 numbers starting with 40.	Use the rule "add 6" to create a sequence of 6 numbers starting with 14.

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Use the rule "subtract 9" to create a sequence of 4 numbers starting with 50.	Use the rule "times 2" to create a sequence of 5 numbers starting with 3.
Use the rule "divide by 5" to create a sequence of 3 numbers starting with 50.	Use the rule "subtract 6" to create a sequence of 6 numbers starting with 100.
Use the rule "times 3" to create a sequence of 3 numbers starting with 2.	Use the rule "add 4" to create a sequence of 5 numbers starting with 11.

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DESCRIBING PATTERNS

Describe the pattern in each table.

lbs.	Total Cost ($)
0	0
1	3
2	6
3	9

Day	# of Guests
1	100
2	200
3	300
4	400

Day	Cupcakes Sold
0	0
1	2
2	4
3	6

lbs.	Total Cost ($)
0	0
2	3
4	6
6	9

Day	Tickets Sold
1	30
2	60
3	90
4	120

Boxes	Cost ($)
0	0
2	10
4	20
6	30

Day	Cookies Made
0	0
3	30
6	60
9	90

Bags	Total Cost ($)
1	5
2	10
3	15
4	20

Kids	Total Spent ($)
10	20
20	40
30	60
40	80

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PLACE VALUE

What is the difference in the value of the 2 in each number below? 832 and 299	What is the difference in the value of the 5 in each number below? 5,934 and 587	Explain the relationship between the 9 in the ones place and 9 in the thousands place in the number 9,999.
Explain the relationship between the 5 in the ones place and the 5 in the tens place in the number 55.	Explain the relationship between the 7 in the hundreds place and the 7 in the ones place in the number 707.	What is the value of the underlined digit? 46.96<u>5</u>
What is the value of the underlined digit? 1,425.<u>8</u>6	What is the value of the underlined digit? 3<u>2</u>,962.8	What is the difference in the value of the 6 in each number below? 465 and 2,697
What is the value of the underlined digit? 3,4<u>8</u>6.77	What is the value of the underlined digit? 899.3<u>5</u>4	Explain the relationship between the 4 in the tenths place and the 4 in the tens place in the number 42.4.

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COMPARE & ORDER DECIMALS

Use <, >, or = to compare the two numbers. 4.5 _____ 4.420	Use <, >, or = to compare the two numbers. 0.67 _____ 0.8	Use <, >, or = to compare the two numbers. 0.125 _____ 0.2
Use <, >, or = to compare the two numbers. 0.82 _____ 0.820	Use <, >, or = to compare the two numbers. 62.4 _____ 6.24	Use <, >, or = to compare the two numbers. 5.23 _____ 5.3
Put the following the numbers in order from least to greatest. 0.3, 0.13, 0.32, 0.303	Put the following the numbers in order from least to greatest. 8.2, 0.82, 0.8, 0.08	Use <, >, or = to compare the two numbers. 9.62 _____ 9.504
Put the following the numbers in order from greatest to least. 24.4, 24.54, 24.304, 24.24	Put the following the numbers in order from greatest to least. 6.05, 6.007, 6.5, 6.25	Use <, >, or = to compare the two numbers. 1.324 _____ 1.42

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ROUNDING DECIMALS

Round 15.435 to the nearest tenth.	Round 567.065 to the nearest hundredth.	Round 874.32 to the nearest ten.
Round 4.623 to the nearest whole number.	Round 0.7845 to the nearest hundredth.	Round 71.963 to the nearest tenth.
Round 6.8245 to the nearest tenth.	Round 182.675 to the nearest hundred.	Round 42.96 to the nearest ten.
Round 18.096 to the nearest whole number.	Round 14.6734 to the nearest hundredth.	Round 28.946 to the nearest tenth.

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MULTI-DIGIT DIVISION

Find each quotient.

186 ÷ 62	525 ÷ 15	896 ÷ 14
288 ÷ 32	688 ÷ 86	156 ÷ 12
1,232 ÷ 14	540 ÷ 20	720 ÷ 48
A bag of candy contains 24 pieces. How many bags are needed for a school of 864 students if each student receives one piece?		A theater has rows of 32 seats. How many rows are needed if 960 people attend a performance at the theater?
Construction paper comes 16 sheets per pack. How many packs need to be purchase in order to get 224 pieces?		

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ADDING DECIMALS

Find each sum.

13.2 + 6.84	19.12 + 0.45	9.326 + 1.42	20.6 + 320.86
12.89 + 4	5.032 + 9.6	15.5 + 3.04	16.32 + 19.404

You buy 2.67 pounds of apples and 4.9 pounds of oranges. How many pounds of fruit did you buy?	Emma grew 2.6 inches last summer and 1.89 during the school year. How much did she grow over the last year?
Gina has three rolls of ribbon. One roll has 12.6 inches, the second has 18.24 inches long and the last has 19.05 inches of ribbon. How much ribbon does she have?	Mark ran 5.23 miles yesterday, 6.4 miles today and will run 2.14 miles tomorrow. How far will he run over the three days?

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SUBTRACTING DECIMALS

Find each difference.

15.2 – 6.25	9.35 – 0.6	10.362 – 1.2	30.5 – 3.23
12.9 – 8.2	8 – 0.25	15.5 – 3	16.32 – 8.1

Your lunch bill is $13.14. A friend pays $6.99. How much is left to pay?	You cut a 2.675 foot section from an 8.9 foot piece of wood. How much is left?
Ryan bought 5.67 pounds of candy and ate 2.9 pounds. How much is left?	Travis has a $20 gift card. He spent $9.62 and then another $2.49. How much is left on the gift card?

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DIVIDING DECIMALS

Find each quotient.

13.2 ÷ 6	9.4 ÷ 2	8.3 ÷ 5	29.2 ÷ 4
25.2 ÷ 5	6.4 ÷ 8	10.35 ÷ 9	30.4 ÷ 8

A 32.34 inch piece of ribbon is cut into 6 pieces. How long is each piece?	A 14.24 pound bag of cheese is split among 5 pizzas. How much chees is on each pizza?
An 8.2 pound bag of candy is shared equally among 10 teachers. How much candy did each teacher get?	A 6.5 foot long piece of wood is cut into 5 sections. How long is each section?

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ADDING FRACTIONS

Find each sum.

$\frac{1}{2}+6\frac{2}{3}$	$\frac{5}{8}+2$	$\frac{9}{10}+3\frac{1}{2}$	$4\frac{1}{5}+6\frac{1}{2}$
$3\frac{1}{4}+4\frac{1}{2}$	$9\frac{1}{3}+4\frac{5}{6}$	$\frac{11}{12}+\frac{3}{4}$	$2\frac{1}{3}+4\frac{1}{5}$
Jake ran $3\frac{1}{2}$ miles Saturday and $4\frac{5}{6}$ miles Sunday. How far did he run over the weekend?		Three sixth grade classes had a pizza party. They ate $4\frac{3}{4}, 5\frac{1}{6}$ and $6\frac{3}{8}$ pizzas.	

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SUBTRACTING FRACTIONS

Find each difference.

$8\frac{1}{2}-4\frac{1}{5}$	$6\frac{3}{4}-2\frac{1}{8}$	$5\frac{3}{5}-1\frac{1}{3}$	$10\frac{4}{5}-3\frac{1}{2}$
$9\frac{7}{8}-\frac{2}{3}$	$15\frac{9}{10}-4\frac{5}{8}$	$8\frac{2}{3}-5\frac{1}{5}$	$4\frac{5}{6}-1\frac{1}{8}$

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MULTIPLYING FRACTIONS

Find each product.

$\frac{2}{5} \times \frac{7}{10}$	$\frac{2}{3} \times 8$	$\frac{5}{6} \times \frac{1}{2}$	$10 \times \frac{4}{5}$

DIVIDING FRACTIONS

Find each quotient.

$\frac{2}{5} \div 8$	$\frac{5}{6} \div 4$	$\frac{7}{8} \div 2$	$\frac{9}{10} \div 4$

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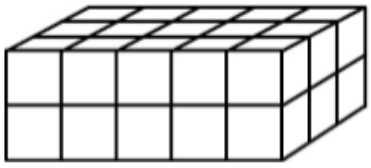
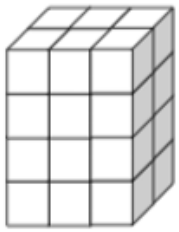
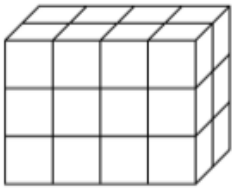
VOLUME

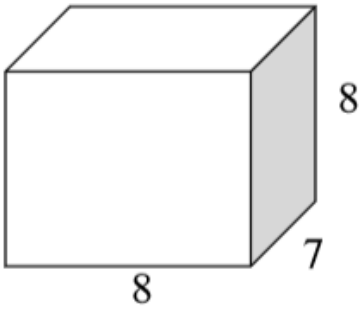
Find the volume of each shape.



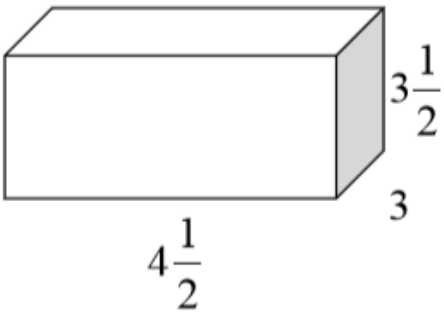




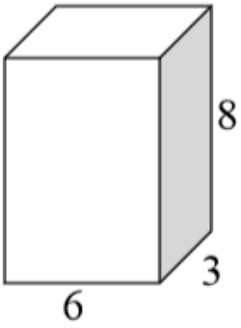
Feet



Inches



Feet



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LINE PLOTS

For questions 1 – 2, create a line plot using the given information.

1. The ages of kids in an art club:

6, 8, 9, 8, 7, 10, 8, 9, 7, 7, 6, 9, 10, 10, 8, 8

2. The height of flowers in a garden:

12, 16, 17, 15, 16, 14, 15, 16, 17, 14, 14, 16, 19, 12, 14, 17

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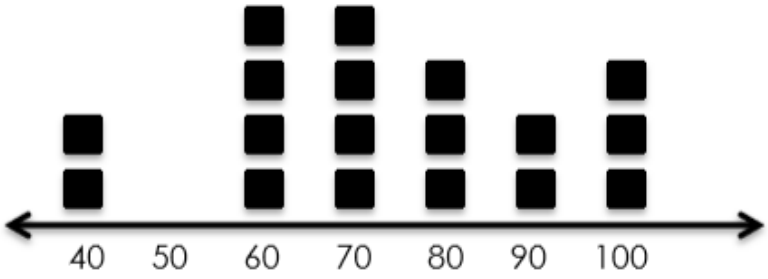
LINE PLOTS

Use the line plot below to answer questions 3 – 5.



3. The line plot shows test scores for a 10 question quiz. How many students scored higher than 70%?

4. How many students got a perfect score?

5. How many students scored 60% or lower?