

Summer Math Packet

For Students Entering Honors Math 5

Dear student,

Last year, you learned and polished an assortment of mathematical skills. Going long periods of time without practicing these skills leads to deterioration and regression, so it is important to continue practicing over the summer in order to build your mathematical foundation. I recommend completing one or two pages a week throughout the summer to keep sharp.

This packet is due the day that you return for school and will be counted as a large chunk of the first trimester's homework credit. **Show your work to earn credit** – attach any extra work if you did any that does not fit in the packet itself. No calculators! Please contact Mr. Holton if you have any questions. Have a great summer, but don't forget what you've learned!

**Adding &
Subtracting
Whole Numbers**

Date:

Find each sum or difference.

1. $1,583,283 + 395,359$

2. $6,483 + 27,174$

3. $20,052 - 14,385$

4. $385,000 - 59,712$

5. Carol earned 17,305 miles by using her credit card last month. This was 3,504 more miles than she earned the previous month. Find the total number of miles she earned in the past two months.

**Multiplying
& Dividing
Whole Numbers**

Date:

Find each product or quotient.

1. $237 \cdot 72$

2. $1,026 \div 57$

3. $415 \div 18$

3. A lion can run 72 feet in one second. How far can the lion run in one minute?

4. If there are 250 boy scouts from a region going on a camping trip and each tent can hold 8 scouts, how many tents are needed?

Whole Number Operations Applications

Date:

Read each problem carefully and solve.

1. Karen read a book with 689 pages. She read 41 pages each day except the last day. How many days did Karen spend reading the book? How many pages did she read on the last day?
2. The population of a city was 329,003 in 2018. This was 6,895 less than the population in 2015. Find the population in 2015.
3. Clay puts an average of 1,128 miles on his car each month. At this rate, how many miles will Clay put on his car in 5 years?

Whole Numbers & Place Value

Date:

Give the place and value of each underlined digit.

1. 5,328,109 2. 1,903,625 3. 48,937,003

4. Write **832,503** in expanded form and word form.

Write each number in standard form:

5. sixty-five thousand, seven hundred four
6. ten million, four hundred thousand, ninety-eight

Compare using a less than or greater than symbol.

7. 37,491 37,905 8. 10,502,392 9,972,835

Rounding Whole Numbers

Date:

Round each number to the indicated place value.

1. 152,032,491; ten million
2. 741,582; thousand
3. 2,274,382; hundred thousand
4. 39,476,041; hundred
5. 14,901,672; million
6. 807,561,783; ten thousand
7. Write the number "Six hundred forty-seven thousand, four hundred two" in standard form, then round to the nearest thousand.

Divisibility Rules

Date:

Use divisibility rules to determine if each number is divisible by 2, 3, 4, 5, 6, 9, or 10. If the number is not divisible by any of these, write "none".

1. 235

2. 671

3. 1,520

4. 495

5. 708

6. 1,314

Greatest Common Factor (GCF)

Date:

Find the GCF of each set of numbers.

1. 32 and 48

2. 108 and 189

3. Graham has 80 blue, 48 red, and 112 yellow balloons. What is the greatest number of balloon arrangements he can make if he wants each arrangement to be the same? How many of each color with each arrangement receive?

Least Common Multiple (LCM)

Date:

Find the LCM of each set of numbers.

1. 27 and 45

2. 8 and 52

3. Flora is buying apples, oranges, and bananas to create fruit baskets. Apples come in bags of 12, oranges come in bags of 9, and bananas come in bunches of 5. If she wants the same number of each fruit, how many of each will she need to buy?

GCF & LCM Applications

Date:

Determine whether you are using a GCF or LCM to solve the problem. Then solve.

1. The library has 126 pencils and 84 bookmarks to give away to children in their morning program. If they wish to give each child an equal number of bookmarks and pencils, what is the maximum number of children they can distribute the materials to if there are none left over? How many pencils and bookmarks will each child receive?
2. Darren and Cora begin walking at the same place on a walkway that surrounds a lake. To go once around the lake, it takes Darren 24 minutes and Cora 32 minutes. Once they begin, after how many minutes will they be in the same place again?

Prime Factorization

Date:

List the factors of each number.

1. 28

2. 90

State whether the number is prime or composite.

3. 97

4. 249

5. 183

Give the prime factorization of each number.

6. 448

7. 396

Decimals & Place Value

Date:

Write the number as a decimal in standard form:

1. sixty-eight and fourteen hundredths
2. eleven and one-hundred and five thousandths

Write the decimal in word form:

3. 23.7
4. 0.0082
5. Order from least to greatest: **0.602, 0.097, 0.0042, 0.83**

Round each number to the indicated place value.

6. 0.9152; hundredths
7. 1.046813; ten-thousandths
8. 21.995; tenths

Modeling Percents

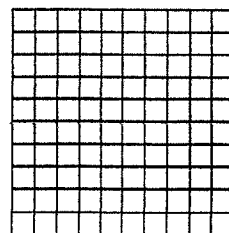
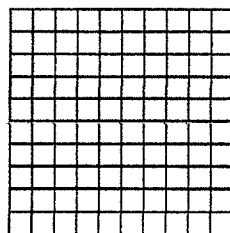
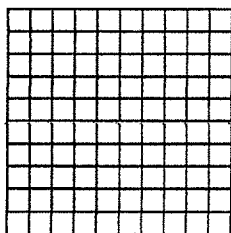
Date:

Model each percent on the 10x10 grid.

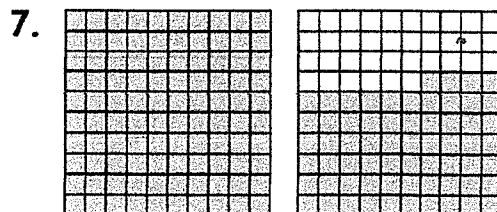
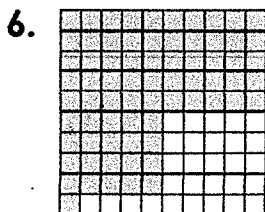
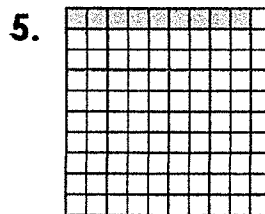
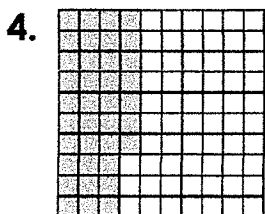
1. 81%

2. 23%

3. 57.5%



Write a percent to represent each model.



Adding & Subtracting Decimals

Date:

Find each sum or difference.

1. $4.879 + 0.732$

2. $17.25 - 9.1$

3. $8.17 + 2.993$

4. $24 - 16.79$

5. Sarah bought a pair of jeans for \$24.95. If she paid \$1.28 in tax and handed the cashier \$30, how much change did she get back?

6. There was 4.71 inches of snow on the ground before a snowstorm brought 15.9 inches. Find the total inches of snow on the ground after the storm.

Multiplying Decimals

Date:

Find each product.

1. 7×5.6

2. 9.16×2.4

3. $0.39(8.57)$

4. $5.5(1.092)$

5. To mail a letter, it costs \$0.48 for the first ounce, then \$0.20 for each ounce thereafter. Find the cost to mail a letter that weighs 4.95 ounces.

Dividing by Whole Numbers

Date:

Find each quotient.

1. $3.25 \div 5$

2. $49.6 \div 8$

3. $\frac{9.5}{4}$

4. $\frac{94.08}{12}$

5. An elevator climbed 67.8 feet in 6 seconds. How many feet per second was the elevator moving if it maintained a constant speed?

Dividing by Decimals

Date:

Find each quotient.

1. $3.12 \div 0.6$

2. $47.5 \div 2.5$

3. $\frac{56.7}{3.24}$

4. $\frac{31.46}{0.052}$

All Decimal Operations

Date:

Evaluate.

1. $15.7 - 6.92 + 74.9$

2. 8.3×5.9

3. $0.79(162.3)$

4. $4.68 \div 9$

5. $13.5 \div 1.2$

6. $\frac{8.8}{0.32}$

Applications with Decimal Applications

Date:

1. Rick is losing weight at an average of 0.328 pounds per day. If his current weight is 203.16 pounds, find his weight after 16 days.

2. Mora has \$27.80 available on her coffee shop gift card. If each cup of coffee costs \$1.60, how many more cups can she buy?

Writing & Simplifying Fractions

Date:

Write each number as an improper fraction.

1. $3\frac{1}{5}$

2. $2\frac{6}{7}$

Write each fraction as a mixed number.

3. $\frac{32}{9}$

4. $\frac{97}{4}$

Simplify. Write your answer as a mixed number when possible.

5. $\frac{28}{40}$

6. $\frac{27}{36}$

7. $2\frac{12}{50}$

8. $\frac{64}{24}$

9. $\frac{20}{12}$

10. $\frac{75}{9}$

Equivalent Fractions & Comparing Fractions

Date:

Write a number in the box that makes the fractions equivalent.

1. $\frac{8}{6} = \frac{\boxed{}}{36}$

2. $\frac{\boxed{}}{9} = \frac{21}{27}$

Determine whether the fractions are equivalent.

3. $\frac{20}{48}, \frac{30}{72}$

4. $\frac{8}{12}, \frac{18}{32}$

5. $\frac{35}{20}, \frac{14}{8}$

Place a $<$, $>$, or $=$ symbol in the circle to compare the fractions.

6. $\frac{3}{4} \bigcirc \frac{7}{9}$

7. $\frac{5}{12} \bigcirc \frac{3}{8}$

8. $\frac{8}{3} \bigcirc \frac{11}{4}$

9. $\frac{7}{12} \bigcirc \frac{14}{24}$

10. $\frac{1}{4} \bigcirc \frac{3}{14}$

11. $\frac{37}{20} \bigcirc \frac{15}{8}$

**Adding &
Subtracting
Fractions**
(Like Bases)

Date:

Find each sum or difference. Write your answer in simplest form and as a mixed number where possible.

1. $\frac{19}{20} + \frac{16}{20}$

2. $1\frac{4}{9} - \frac{7}{9}$

3. $\frac{23}{24} - \frac{5}{24}$

4. $3\frac{5}{8} + 1\frac{7}{8}$

5. Kent ran $3\frac{11}{12}$ miles and Trey ran $5\frac{1}{12}$ miles. How much further did Trey run than Kent?

**Adding &
Subtracting
Fractions**
(Unlike Bases)

Date:

Find each sum or difference. Write your answer in simplest form and as a mixed number where possible.

1. $\frac{3}{8} + \frac{5}{24}$

2. $6\frac{7}{10} - 5\frac{1}{5}$

3. $4\frac{5}{12} + 1\frac{1}{4}$

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

5. Lana bought $1\frac{5}{18}$ pounds of sliced turkey and $1\frac{7}{12}$ pounds of sliced ham. How many total pounds of meat did she buy?

Multiplying Fractions

Date:

Find each product. Write your answer in simplest form and as a mixed number where possible.

1. $\frac{4}{9} \cdot \frac{3}{14}$

2. $2\frac{1}{4} \cdot \frac{8}{15}$

3. $1\frac{1}{20} \cdot 3\frac{5}{9}$

4. $3\frac{3}{5} \cdot 2\frac{1}{12}$

5. When Sam planted a tree, it was $4\frac{7}{8}$ feet tall. If the tree is now $1\frac{1}{3}$ times as tall as when he planted it, find the height of the tree.

Dividing Fractions

Date:

Find each quotient. Write your answer in simplest form and as a mixed number where possible.

1. $\frac{9}{10} \div \frac{3}{15}$

2. $1\frac{1}{24} \div \frac{15}{16}$

3. $\frac{3}{8} \div 1\frac{7}{20}$

4. $7\frac{1}{3} \div 8$

5. A runner ran $50\frac{2}{3}$ yards in $11\frac{1}{5}$ seconds. Approximately how many yards did he run each second if he averaged the same pace?

Fraction & Decimal Conversions

Date:

Write each decimal as a fraction in simplest form.

1. 0.2

2. 4.64

3. 1.575

Write each fraction as a decimal.

4. $\frac{1}{8}$

5. $3\frac{9}{20}$

6. $\frac{25}{3}$

7. $2\frac{7}{11}$

8. $\frac{2}{15}$

9. $\frac{17}{6}$

Translating Expressions

Date:

Translate the following expressions:

1. "9 less than a number "

2. "the product of a number and 13"

3. "the sum of a number and 60"

4. "the quotient of 48 and a number"

5. "the difference of twice a number and 27"

6. "a number squared subtracted from 40"

Write each expression in words.

7. $\frac{2x}{5}$

8. $\frac{1}{3}x - 28$

All Fraction Operations

Date:

Evaluate.

1. $\frac{2}{3} + \frac{1}{12}$

2. $1\frac{7}{10} - \frac{5}{6}$

3. $2\frac{4}{9} + 1\frac{5}{12}$

4. $\frac{8}{21} \cdot 3\frac{3}{4}$

5. $2\frac{2}{15} \cdot 1\frac{7}{18}$

6. $\frac{9}{10} \div \frac{6}{14}$

7. $\left(\frac{17}{18} - \frac{1}{2}\right) \div 10$

8. $1\frac{3}{4} - \frac{9}{20} \cdot \frac{5}{24}$

Applications with Fraction Operations

Date:

1. Each walk around the block is $1\frac{7}{15}$ miles. If Valencia walked around the block $4\frac{7}{12}$ times, how far did she walk?
2. Kate watched $\frac{3}{20}$ of a movie on Friday, then $\frac{4}{15}$ more of the movie on Saturday. What fraction of the movie does she have left to watch?
3. A jug of laundry soap contains $40\frac{5}{6}$ ounces. If Alex uses $1\frac{7}{9}$ ounces of laundry, how many loads can he wash?

Comparing Fractions & Decimals

Date:

Compare the numbers using a $<$, $>$, or $=$ symbol.

1. $1\frac{3}{4}$ 1.295

2. $\frac{19}{8}$ $2.\bar{3}$

3. 11.89 $11\frac{8}{9}$

4. 5.08 $5\frac{3}{20}$

5. Chen, Elisa, and Levi finished in the top three in a 5K run. The table to the left gives their run times in minutes. List them in the order that they finished from first to third.

Chen	$29\frac{9}{40}$
Elisa	29.2
Levi	$29\frac{4}{15}$

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Proportional Relationships: Missing Values

Date:

The quantities in each table represent a proportional relationship. Find each missing value.

1.

Creamer (oz)	2	
Coffee (oz)	8	50

2.

Weeks	4	14
Inches	6	

3.

Gallons of Gas		20
Cost (\$)	18	48

4. An elevator traveled 50 feet in 4 seconds. At this rate, how far would the elevator travel in 30 seconds?

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Ratios

Date:

Write each ratio in simplest form.

- 36 stars to 54 hearts
- 92 blueberries to 48 strawberries
- 15 teachers to 87 students
- 180 calories to 24 grams of fat
- What is the ratio of vowels to the total number of letters in the word **ACCOMPLISHMENT**?
- Marc is playing a card game. He has 7 hearts, 2 diamonds, 4 spades, and 8 clubs in his hand. What is the ratio of red cards to the total cards in his hand?

Equivalent Ratios



Date:

- Using the shapes to the left, write three equivalent ratios for the number of stars to the number of moons.

Fill in a box that with a value that makes the ratios equivalent.

- $\frac{9}{4}$ and $\frac{\boxed{}}{24}$
- $\frac{24}{56}$ and $\frac{3}{\boxed{}}$
- $\frac{5}{\boxed{}}$ and $\frac{15}{72}$

- A 12-ounce can of tea contains 210 calories. If Katy drank 4 ounces, how many calories did she consume?
- Rick went over a bridge 5 times last week and paid \$9 in tolls. If he spends \$63 in tolls for the month, how many times did he go over the bridge?