

Dear Incoming 7<sup>th</sup> Graders,

You are expected to complete this Summer Math Packet to be best prepared for your scheduled math class in September. This packet is **due the first week of school** and will be worth a test grade.

**Scoring/Grading:**

The Summer Math Packet is worth a total of **30 points**:

- Each page of the packet has a value of **2 points** if totally complete and work is shown.
- Any partially completed pages with work shown will earn part credit (1 point).
- Incomplete pages (pages that are not done) earn no credit.
- After the packet is handed in, there will be a daily quiz on the material that was covered in it.

**Directions:**

- Complete each problem on all pages of the packet and **show all work**.
- The packet will also be posted on my web site: [www.mathmakeslifeaddup.weebly.com](http://www.mathmakeslifeaddup.weebly.com)
- Complete all work neatly and organized on the packet page or lined paper. Craftsmanship counts!
- It is best that you work without a calculator to strengthen your math fact fluency.
- Turn in your labeled and organized packet with all work.

**Resources:**

For examples and support you can reference any of the sites below and search the skill/concept from the top of each page.

- KhanAcademy.com
- YouTube.com or TeacherTube.com
- MathIsPower4u.com
- IXL.com
- Learnzillion.com
- Mathisfun.com

**The front page of this packet must be signed by you (the student) and by a parent/guardian.**

x \_\_\_\_\_  
Student signature

x \_\_\_\_\_  
Parent/Guardian signature

I'm looking forward to an exciting math adventure for the 2014-2015 school year!

Best,

Mrs. Kroopneck  
7/8 Math Teacher  
Brennan-Rogers Magnet School

Name \_\_\_\_\_

Summer Packet Math 7  
(use online support materials if needed)

Place Value with Whole Numbers and Decimals

Write the place value of the underlined digit. (Complete problems 1-8)

1. 4.567296

\_\_\_\_\_

2. 23.486

\_\_\_\_\_

3. 3.05423

\_\_\_\_\_

4. 8,456.68

\_\_\_\_\_

5. 953,023

\_\_\_\_\_

6. 8.9723

\_\_\_\_\_

Multiple Choice: Circle the correct answer.

7. What is the value of the underlined digit in the number 7.0878?
- a. 8 hundreds
  - b. 8 thousandths
  - c. 8 tenths
  - d. 8 hundredths
8. Which number is in the ten-thousands place in the number 2,130,629.4758?
- a. 6
  - b. 1
  - c. 2
  - d. 3

Name \_\_\_\_\_

**Summer Packet Math 7**  
(use online support materials if needed)

**Rounding Whole Numbers and Decimals (Complete problems 1-8)**

Round to the nearest ten-thousandth

1. 42,398.567296

\_\_\_\_\_

Round to the nearest cent

2. \$423.486

\_\_\_\_\_

Round to the nearest thousandth

3. 2,343.05423

\_\_\_\_\_

Round to the nearest cent

4. \$8,456.6888

\_\_\_\_\_

Round to the nearest whole number

5. 9.5023

\_\_\_\_\_

Round to the nearest cent

6. \$58.9723

\_\_\_\_\_

**Multiple Choice: Circle the correct answer.**

7. Round 7.0878 to the nearest underlined digit.

- e. 7.09
- f. 7.9
- g. 7.08
- h. 7.1

8. Round 3,211.62147 to the nearest thousand.

- e. 3,000
- f. 3211.6215
- g. 3,200
- h. 3211.621

Name \_\_\_\_\_

Summer Packet Math 7  
(use online support materials if needed)  
Go Math 6 page 107

Operations with Whole Numbers

Add, subtract, multiply or divide. Show your work on all Problems (1-8).

1.  $23 + 408 + 7 + 1,235$

2.  $3,456 - 1,982$

3.  $3,006 - 2,547$

4.  $84 \times 37$

5.  $1,042 \times 89$

6.  $2006 \times 16$

7.  $1,205 \div 5$

8.  $57,060 \div 12$

Name \_\_\_\_\_

**Operations with Decimals – Show all work for problems 1-10.**

1.  $6.53 + 18 + 26.008$

2.  $28.43 + 0.002 + 1.9$

3.  $4.59 - 0.399$

4.  $7.06 - 5.49$

5.  $28.9 \times 0.103$

6.  $0.095 \times 0.4$

7.  $3.941 \div 0.07$

8.  $0.3784 \div 1.1$

**Multiple Choice: Circle the correct answer.**

9.  $72.91 + 43$

- a. 73.34
- b. 29.91
- c. 115.91
- d. 7,334

10.  $1.2 \times 0.04$

- a. 0.048
- b. 0.48
- c. 4.80
- d. 48.0

Name \_\_\_\_\_

Summer Packets Math 7  
(use online resource materials if needed)

Go Math 6 – pages 59 and 44

## Comparing Fractions

Compare using = , <, or >. Complete problems 1 – 4.

1.  $\frac{7}{9}$        $\frac{5}{7}$

2.  $\frac{8}{13}$        $\frac{3}{4}$

3.  $\frac{2}{3}$        $\frac{8}{12}$

4.  $\frac{5}{15}$        $\frac{8}{20}$

## Improper Fractions and Mixed Numbers

Write each improper fraction as a mixed number. Complete problems 1-6.

1.  $\frac{51}{4}$

2.  $\frac{85}{6}$

3.  $\frac{141}{8}$

Write each mixed number as an improper fraction.

4.  $7\frac{2}{5}$

5.  $21\frac{1}{10}$

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

Name \_\_\_\_\_

Summer Packet Math 7  
(use online support material if needed)  
Go Math 6 page 81

**Adding Fractions – Show all work for problems 1-4**

1.  $\frac{7}{9} + \frac{5}{9}$

2.  $\frac{8}{13} + \frac{3}{13}$

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

4.  $\frac{11}{15} + \frac{13}{25}$

**Subtracting Fractions – Show all work for problems 1-4.**

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

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

3.  $\frac{4}{5} - \frac{1}{3}$

4.  $\frac{5}{6} - \frac{1}{12}$

Name \_\_\_\_\_

Summer Packet Math 7  
(use online support material if needed)  
Go Math 6 pages 79 - 82

**Adding and Subtracting Mixed Numbers – Show all work for problems 1 – 4.**

1.  $20\frac{3}{8} + 14\frac{1}{2}$

2.  $6\frac{1}{4} + \frac{7}{9}$

3.  $18\frac{1}{7} - 12\frac{3}{7}$

4.  $2\frac{1}{25} - 1\frac{4}{5}$

**Multiplying Fractions – Show all work for problems 1 – 4.**

1.  $\frac{7}{20} \cdot \frac{5}{14}$

2.  $\frac{11}{14} \cdot \frac{2}{33}$

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

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



Name \_\_\_\_\_

**Dividing Fractions – Show all work for problems 1 – 4.**

1.  $\frac{8}{9} \div \frac{14}{15}$

2.  $\frac{3}{10} \div \frac{12}{25}$

3.  $\frac{2}{7} \div \frac{1}{4}$

4.  $\frac{1}{7} \div \frac{11}{14}$

**Multiplying and Dividing Mixed Numbers – Show all work for problems 1–4.**

1.  $12 \div 4\frac{4}{5}$

2.  $\frac{3}{10} \cdot 25$

3.  $2\frac{1}{4} \div 18$

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

Name \_\_\_\_\_

**Divisibility Rules**

**Summer Packet Math 7**

(use online support material if needed)

<b>Divisibility Rules</b>		
2 if the ones digit is divisible by 2	54	Four is divisible by 2.
3 if the sum of the digits is divisible by 3	72	$7 + 2 = 9$ , and 9 is divisible by 3.
4 if the last two digits are divisible by 4.	520	20 is divisible by 4. Therefore, 520 is divisible by 4.
5 if the ones digit is 0 or 5	65	The ones digit is 5.
6 if the number is divisible by 2 and 3	48	8 is divisible by 2. $4 + 8 = 12$ and 12 is divisible by 3. So, 48 is divisible by 6.
9 if the sum of the digits is divisible by 9	954	$9 + 5 + 4 = 18$ , and 18 is divisible by 9.
10 if the ones digit is 0	120	The ones digit is 0.

**State if the following numbers are divisible by 2, 3, 4, 5, 6, 9, or 10.**

1. 245 \_\_\_\_\_

2. 560 \_\_\_\_\_

3. 366 \_\_\_\_\_

4. 423,450 \_\_\_\_\_

5. 693 \_\_\_\_\_

6. 324 \_\_\_\_\_

Name \_\_\_\_\_

Summer Packet Math 7  
Go Math 6 pages 249 - 254

Order of Operations – Show all work for problems 1-9.

1)  $24 \div 2 \cdot 3$

2)  $3 + 4 - 2$

3)  $33 - 9 \cdot 3$

4)  $\frac{4(2+3)}{13-10+2}$

5)  $5 + 4 \cdot 9$

6)  $(25 - 10) \div (3 + 2)$

7)  $4 - 3 + 2$

8)  $2(3 + 6)$

9)  $3 + 5(2)$

Name \_\_\_\_\_

**Write the integer represented by each phrase.**

1. a gain of 10 yards \_\_\_\_\_
2. a loss of 15 pounds \_\_\_\_\_
3. 30 feet below sea level \_\_\_\_\_
4. 10 degrees above zero \_\_\_\_\_

**Translate the words into an expression.**

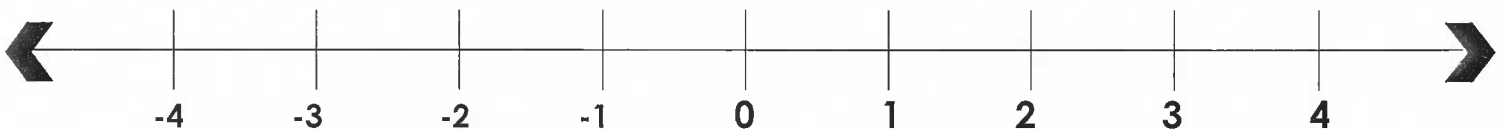
5. The quotient of 7 and a number  $x$  \_\_\_\_\_
6. Twice the number  $x$  increased by 2 \_\_\_\_\_
7. The product of 8 and negative 9 \_\_\_\_\_
8. four less than a number  $x$  \_\_\_\_\_

**Write the integer represented by each phrase.**

9. the opposite of 5 \_\_\_\_\_
10. the absolute value of -8 \_\_\_\_\_

**Locate each number on the number line below.**

11. -3, 0,  $\frac{1}{2}$ , 2, -1



Name \_\_\_\_\_

**Fractions to Decimals and Percents – Show all work for problems 1 – 6.**

Write a decimal for each fraction.

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

2.  $\frac{1}{6}$

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

Write a percent for each fraction.

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

5.  $\frac{7}{20}$

6.  $3\frac{3}{8}$

**Decimals to Fractions and Percents – Show all work for problems 1 – 6.**

Write each decimal as a fraction in simplest form.

1. 0.35

2. 1.5

3. 0.125

Write each decimal as a percent.

4. 0.452

5. 20.5

6. 0.006

Name \_\_\_\_\_

**Ratios and Rates – Complete problems 1 – 10.**

**Write each ratio as a fraction in simplest form.**

1. 10 pines out of 60 trees \_\_\_\_\_
2. 15 cassettes to 45 CDs \_\_\_\_\_
3. 10 inches to 2 inches \_\_\_\_\_

**Express each ratio as a unit rate. Round to the nearest tenth, if necessary.**

4. 144 meters in 12 seconds \_\_\_\_\_
5. 45 yards for 9 costumes \_\_\_\_\_
6. 90 pages in 30 minutes \_\_\_\_\_

**Write each ratio in three ways in simplest form.**

7. 10 boys to 12 girls  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**There are 30 animals in the field. Twelve are cows, 8 are horses, and the rest are ducks. Write the following ratios as fractions in simplest form.**

8. horses to ducks \_\_\_\_\_
9. total animals to cows \_\_\_\_\_
10. cows to horses \_\_\_\_\_

Name \_\_\_\_\_

Measures of Central Tendency – Complete problems 1 – 2. Show all work.

	Definition	Example
<b>Mean</b>	Sum of the data values divided by the number of values in the data set.	<b>Data:</b> 24, 36, 21, 30, 21, 30;  Mean = $\frac{24 + 36 + 21 + 30 + 21 + 30}{6} = \frac{162}{6} = 27$
<b>Median</b>	The middle number in a data set when the numbers are arranged in numerical order. If there is an even number of values, the <i>median</i> is the <i>mean</i> of the <i>two middle</i> numbers.	<b>Data:</b> 6, 8, 9, 10, 13 Median = 9 because 9 is the middle number  <b>Data:</b> 21, 21, 25, 30, 31, 42; Median = $\frac{25 + 30}{2} = 27.5$
<b>Mode</b>	The number or numbers that occur most often in the set of data.	<b>Data:</b> 21, 21, 24, 30, 30, 36; Mode(s) = 21 and 30 both appear twice

The difference between the highest value and the lowest value is called the **range** of the set of data. Find the range of this data set: 12, 10, 6, 22, 9, 18, and 16.

**Range** =  $22 - 6 = 16$

**Find the mean, median, mode and range for each set of data. Show all work. Round to the nearest tenth if necessary.**

1. Maria's test scores: 85, 80, 95, 100, 90, 85

Mean = \_\_\_\_\_

Median = \_\_\_\_\_

Mode = \_\_\_\_\_

Range = \_\_\_\_\_

2. Weekly snowfall total in inches: 1, 3, 5, 1, 2, 0, 2

Mean = \_\_\_\_\_

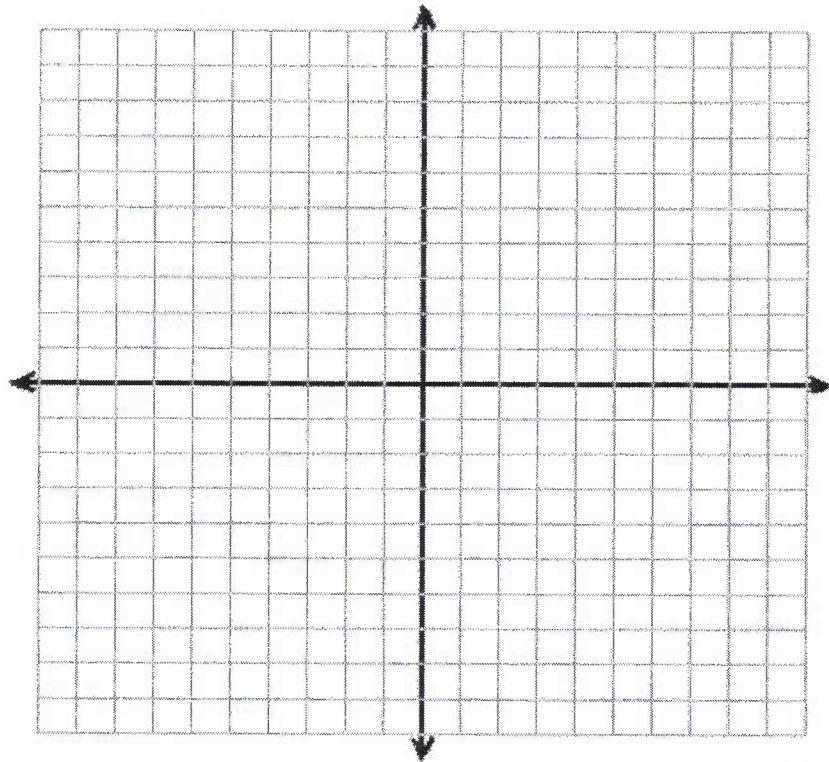
Median = \_\_\_\_\_

Mode = \_\_\_\_\_

Range = \_\_\_\_\_

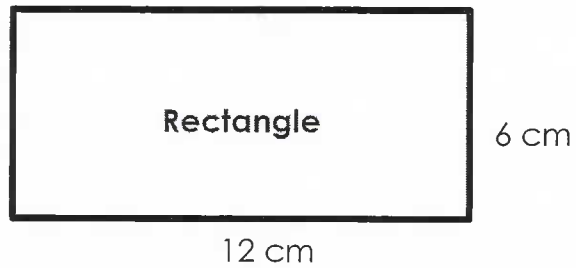
Graph and label each ordered pair on the coordinate plane.

- 1. A (3, 0)
- 2. B (-2, 5)
- 3. C (2, -3)
- 4. D (0, -5)
- 5. E (3, 6)
- 6. F (-1, -4)



Find the perimeter and area of each figure. Show all work.

- 7. Area = \_\_\_\_\_  
Perimeter = \_\_\_\_\_



- 8. Area = \_\_\_\_\_  
Perimeter = \_\_\_\_\_

