7th Grade Summer Mathematics Review Packet

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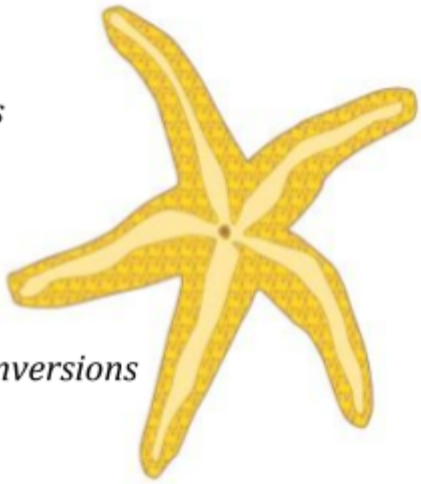

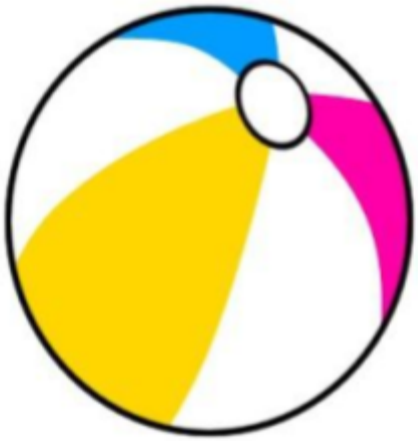

Dear Rising 7th Graders,

I would like to wish you all a happy summer and congratulate you on finishing a successful year in 6th grade! I am excited for our class next year and to spend the year with you all.

PART ONE: SUMMER MATH PACKET

- You will be quizzed on this material during the first full week of school.
- Calculators will not be allowed on the quiz you take covering this material, and so it will only hurt you if you use one to complete this assignment. Please do not use a calculator on this assignment, except to check your work; however, note that you will not be able to do this on the quiz.
- The goal of this assignment is not to "get it done as fast as possible." The purpose is to make sure you don't forget all that you learned this past year. Please pace yourself.

Don't try to complete the assignment all at once. Similarly, don't put it off until the last week in August.

To help you pace yourself, I'm asking that you and your parent/guardian keep track of your work. Try your best to complete one worksheet per week. I understand that it is summer, and that this might not be possible every week. Please use the chart on the back of this page to keep track of the work you do this summer. We will collect this form when we collect your work in September. Do your best at pacing yourself, and be honest in reporting how you complete your work.

I look forward to working with you all next year. My hope is that this assignment will allow us to "hit the ground running" at the beginning of the year, so that you will be very well prepared for 7th grade math. If you have any questions, or need any hints over the summer please feel free to email your 6th grade math teachers, katherine.amundson@pcsst.org or ilana.schamberg@pcsst.org

HAPPY SUMMER!

~Your 7th Grade Math Teacher~

7th Grade Summer Mathematics Review Packet

Please complete this chart as you complete the assignments. You may complete assignments any order you like, as long as you stay on track to finish by the end of August. Good luck, and feel free to e-mail your 6th grade teachers with questions!

Assignment	Parent/Guardian Signature	Date Completed
Topic One: Operations with Whole Numbers		
Topic Two: Simplifying Fractions		
Topic Three: Factors and Multiples		
Topic Four: Adding and Subtracting Fractions		
Topic Five: Multiplying and Dividing Fractions		
Topic Six: Decimal-Fraction-Percent Conversions		
Topic Seven: Adding and Subtracting Decimals		
Topic Eight: Multiplying and Dividing Decimals		
Topic Nine: Ratios, Rates, and Proportions		
Topic Ten: An Assortment of Word Problems ☺☺		

TOPIC ONE: OPERATIONS WITH WHOLE NUMBERS:

Instructions: Find the answer **without using a calculator**. Calculators will not be allowed on the quiz in the fall. If you do work on a separate sheet of paper, please staple that sheet to this worksheet. *Round your answer to the nearest hundredth for division.*

1. $47 + 32 =$
2. $678 + 426 =$
3. $4389 + 3377 + 1689 =$
4. $87 - 20 =$
5. $493 - 37 =$
6. $81 \times 57 =$
7. $205 \times 34 =$
8. $588 \div 7 =$
9. $128 \div 5 =$
10. $3^2 + 6 - 2 \times 7 =$
11. $2^4 \div 2^3 \times 3^5 =$
12. $20 \div 5 \times 2 - (6 + 2) \times 7 =$

TOPIC TWO: SIMPLIFYING FRACTIONS

Instructions: Find the answer **without using a calculator**. Calculators will not be allowed on the quiz in the fall. If you do work on a separate sheet of paper, please staple that sheet to this worksheet.

1. *Identify which of the following are improper fractions.*

   a. $\frac{21}{2}$

   b. $\frac{4}{5}$

   c. $\frac{83}{126}$

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

2. *Change the mixed numbers to improper fractions.*

1. $2\frac{4}{5}$
2. $6\frac{11}{17}$
3. $12\frac{8}{45}$
4. $9\frac{3}{61}$
5. $87\frac{41}{69}$

3. Change improper fractions to mixed numbers.

1. $\frac{8}{3}$
2. $\frac{10}{7}$
3. $\frac{56}{17}$
4. $\frac{132}{11}$
5. $\frac{94}{93}$

4. Simplify to lowest terms.

1. $\frac{3}{18}$
2. $\frac{15}{25}$
3. $\frac{6}{8}$
4. $\frac{37}{37}$
5. $\frac{66}{99}$

TOPIC THREE: FACTORS & MULTIPLES

Find all of the factors.

1. 6

2. 7

3. 20

Identify which of the following numbers are prime:

4. a) 14 b) 4 c) 11 d) 9 e) 3

Find the prime factorization. Use exponents when applicable.

5. 12

6. 18

7. 105

8. 125

9. 42

Find the LCM.

10. 2, 3 and 4

11. 6 and 8

12. 3, 5, and 6

13. 3, 4 and 5

TOPIC FOUR: ADDING & SUBTRACTING FRACTIONS

Instructions: Find the answer **without using a calculator**. Calculators will not be allowed on the quiz in the fall. If you do work on a separate sheet of paper, please staple that sheet to this worksheet.

1. $\frac{12}{17} + \frac{3}{17}$

2. $\frac{11}{12} + \frac{1}{12}$

3. $\frac{7}{10} + \frac{2}{10} + \frac{8}{10}$

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

5. $\frac{5}{6} + \frac{1}{4}$

6. $2\frac{2}{3} - \frac{1}{3}$

7. $6\frac{1}{2} - 3$

8. $10 - 3\frac{2}{3}$

9. $1\frac{1}{2} - \frac{7}{10}$

10. $2\frac{1}{2} - 1\frac{3}{4}$

TOPIC FIVE: MULTIPLYING & DIVIDING FRACTIONS

Instructions: Find the answer **without using a calculator**. Calculators will not be allowed on the quiz in the fall. If you do work on a separate sheet of paper, please staple that sheet to this worksheet.

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

2. $\left(\frac{5}{9}\right)\left(\frac{3}{10}\right)$

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

4. $\left(\frac{3}{16}\right)(8)$

5. $1 \div \frac{1}{8}$

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

7. $6\frac{2}{5} \div 20$

8. $3\frac{4}{5} \div 1\frac{2}{15}$

TOPIC SIX: DECIMALS-FRACTIONS-PERCENTS CONVERSIONS

Find the equivalent fraction. Reduce to lowest terms.

1. 0.8
2. 0.41

Write each percent as a fraction or mixed number. Simplify.

1. 21%
2. 14%
3. 21.5%

Write each percent as a decimal.

1. 47%
2. 26.3%
3. 219%

Write each decimal as a percent.

1. 0.04
2. 6.8

Write each fraction as a percent.

1. $\frac{3}{4}$
2. $\frac{1}{8}$
3. $2\frac{3}{5}$

TOPIC SEVEN: ADDING & SUBTRACTING DECIMALS

Instructions: Find the answer **without using a calculator**. Calculators will not be allowed on the quiz in the fall. If you do work on a separate sheet of paper, please staple that sheet to this worksheet.

1. $3.5 + 6.14$

2. $1.306 + 5.5 + 46.77$

3. $0.9 - 0.2$

4. $35.87 - 10.2$

5. $28 - 15.59$

TOPIC EIGHT: MULTIPLYING & DIVIDING DECIMALS

Instructions: Find the answer **without using a calculator**. Calculators will not be allowed on the quiz in the fall. If you do work on a separate sheet of paper, please staple that sheet to this worksheet. Division: *Round your answer to the hundredths place.*

1. 0.7×0.4

2. 31.002×9

3. 0.0085×0.044

4. $0.31 \div 0.2$

5. $1.632 \div 0.08$

TOPIC NINE: RATIOS, RATES, & PROPORTIONS

Write each ratio and rate as a fraction in lowest terms.

1. 30 feet to 60 feet

2. 21 females to 51 males

3. $4.20 for 36 potatoes

Find the unit rate.

6. 5 cars for 20 people.

7. $36 for 4 lbs of shrimp.

Write each proportion.

10. 48 is to 32 as 3 is to 2.

11. If 12 pens cost $4, then 33 pens will cost $11.

Solve each proportion to find the value of "x".

12. $\frac{3}{6} = \frac{x}{18}$

13. $\frac{52}{x} = \frac{4}{1}$

14. $\frac{15}{12} = \frac{10}{x}$

Instructions: Find the answer **without using a calculator**. Calculators will not be allowed on the quiz in the fall. If you do work on a separate sheet of paper, please staple that sheet to this worksheet. Division: *Round your answer to the hundredths place.*

1. Your brother traveled 117 miles in 2.25 hours to come home for school break. What's the average speed that he was traveling?

2. You have 15 yards of ribbon for your gift boxes. Each box gets the same amount of ribbon. How much ribbon will each of your 20 gift boxes get?

3. You finally get an allowance! You put $2 away in January, $4 away in February, $8 away in March, $16 away in April and followed this savings pattern through to December. How much money do you have in 12 months?

4. It takes 6 cubes to build a staircase with 3 steps. How many cubes will be needed for 11 steps?