

Dear Skinner Middle School parents and students,

In preparation for the 2018-2019 school year, each student entering 7th grade is required to complete a summer math review packet. This packet correlates to the Common Core State Standards and focuses on the prerequisite concepts and skills necessary for student success in math class. During the first week of school, students will turn in their packets for a grade. All students will have the opportunity to ask follow up questions. The packet will also be available for download at the Skinner Middle School website: skinner.dpsk12.org

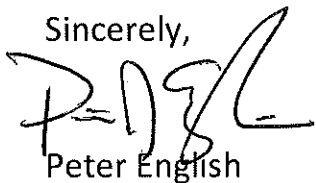
While completing, you must show your work. If you need to use additional paper, make sure it is stapled to the packet when it is turned in.

This packet is a summary of 6th grade standards. In seventh grade, students are expected to perform these tasks proficiently as seventh grade standards build upon sixth grade standards. Students should ensure that their best work is reflected on this homework as seventh grade is a continuation and expansion of sixth grade mathematical thinking.

The packet is **DUE: The FIRST DAY OF SCHOOL, August 20, 2018.**

Have a great summer, and we are looking forward to a great 2018-2019 year.

Sincerely,



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7th Grade Math

Skinner Middle School



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7th Grade Math

Skinner Middle School



Summer Homework

Evaluate each expression. Show your work for full credit. (Aligned to 6 NS3- adding and subtracting decimals)

1) $47.84 - 8.147$

2) $23.7 + 38.6$

3) $20.9 + 7.5$

4) $34.3 - 21.38$

Find each product. Show your work for full credit. (Aligned to 6 NS 3- multiplying decimals)

5) 2.4×6.4

6) 9.6×6.2

7) 5.2×4.22

8) 2.5×3.1



Evaluate each expression. Show your work for full credit. (Aligned to 5 NF 1- adding and subtracting decimals)

9) $1\frac{5}{6} - 1\frac{3}{4}$

10) $4\frac{1}{4} + 3\frac{5}{8}$

11) $2\frac{7}{8} + 4\frac{1}{2}$

12) $2 + 1\frac{1}{4}$

Find each product. Show your work for full credit. (Aligned to 6 NS 1- multiplying fractions)

13) $\frac{2}{3} \times \frac{3}{2}$

14) $4\frac{2}{9} \times \frac{3}{2}$

Find each quotient. Show your work for full credit. (Aligned to 6 NS 1- dividing fractions)

15) $4\frac{1}{2} \div \frac{3}{4}$

16) $\frac{4}{9} \div 2$

17) $754 \div 26$

18) $224 \div 28$

Expressions and Equations

Use inverse (opposite) operations to solve each equation. (Aligned to 6 EE 6, solving one step equations)

$15 + x = 167 \quad x = \underline{\hspace{2cm}}$

$16x = 80 \quad x = \underline{\hspace{2cm}}$

$\frac{p}{3} = 18 \quad p = \underline{\hspace{2cm}}$

$-16 + c = 467 \quad c = \underline{\hspace{2cm}}$

$8x = 44 \quad x = \underline{\hspace{2cm}}$

$\frac{x}{7} = 12.5 \quad x = \underline{\hspace{2cm}}$

Evaluate each expression. Use the values for the variables below. (Aligned 6 EE 2- using substitution to evaluate algebraic expressions)

$A = 6 \quad b = 8 \quad c = 10$

$c^2 - 20 = \underline{\hspace{2cm}}$

$3b - 3^3 = \underline{\hspace{2cm}}$

$a^2 + 2b - c = \underline{\hspace{2cm}}$

Ratios and proportions (Aligned to 6 RPA 3- using rate and ratio reasoning to solve real world problems)

- 1) John can create 20 paintings in 4 weeks. How many paintings can he create in 1 week? How many paintings can he create in 6 weeks?

- 2) Charlie buys 3 computer tables for \$390. How much would he pay for 1 computer tables? How much would he pay for 5 tables?

3) An ice cream factory makes 100 quarts of ice cream in 5 hours. How many quarts can be made in 36 hours?

4) You can buy 3 apples at Safeway for \$1.29. You can buy 5 apples for \$2.45 at King Soopers. Which place is the better buy?

Use the table to solve the following problems. (Aligned to 6 RP 3- Using tables to solve ratio problems)

1. You can buy 4 cans of green beans at the market for \$2.25. How much will it cost to buy 12 cans of beans?

Cans	4 cans	8 cans	12 cans
Cost	\$2.25		

2. An ice-cream factory makes 180 quarts of ice cream in 2 hours. How many quarts could be made in 12 hours?

Ice Cream	180 quarts					
Hours	2 hours	4 hours	6 hours	8 hours		

3. A jet travels 650 miles in 3 hours. At this rate, how far could the jet fly in 9 hours?

Distance	650 miles		
Hours	3 hours		

4. A bakery can make 640 bagels in 4 hours. How many can they bake in 16 hours?

Bagels	640 bagels			
Hours	4 hours			

Aligned to 6 EE B4 (Solve real life math problems using equations)

- 1) Stephanie is helping her band collect money to fund a field trip. The band decided to sell boxes of chocolate bars. Each bar sells for \$1.50 and each box contains 20 bars. Below is a partial table of monies collected for different numbers of boxes sold.

Boxes Sold	Money Collected
b	m
1	\$30.00
2	
3	
4	
5	\$150.00
6	
7	
8	

- a. Complete the table above for values of m .
- b. Write an equation for the amount of money, m , that will be collected if b boxes of chocolate bars are sold. Which is the independent variable and which is the dependent variable?
- c. Calculate how much money will be collected if 100 boxes of chocolate bars are sold.
- d. The band collected \$1530.00 from chocolate bar sales. How many boxes did they sell?

Resource Sheets

Adding and Subtracting Fractions:

- 1) Rewrite the fractions with a common denominator
- 2) Add or subtract the numerators
- 3) Simplify the fraction

$$\begin{array}{r} \frac{1}{3} + \frac{1}{6} \\ \frac{1 \times 2}{3 \times 2} + \frac{1}{6} \\ + \frac{1 \times 1}{6 \times 1} \\ \hline \frac{2}{6} + \frac{1}{6} \\ \hline \frac{3}{6} = \frac{1}{2} \end{array}$$

Adding and Subtracting Mixed Numbers:

- 1) Rewrite the fractions with a common denominator
- 2) Rename, if necessary
- 3) Add or subtract the fractions. Add or subtract the whole numbers
- 4) Simplify if necessary

$$\begin{array}{r} 3\frac{1}{4} - 1\frac{1}{3} \\ 3\frac{1}{4} = 2\frac{3}{12} + \frac{12}{12} = 2\frac{15}{12} \\ - 1\frac{1}{3} = 1\frac{4}{12} \\ \hline 1\frac{11}{12} \end{array}$$

Multiplying Fractions and Mixed Numbers:

- 1) Convert mixed numbers to improper fractions
- 2) Cross simplify if possible
- 3) Multiply the 2 numerators and then multiply the 2 denominators
- 4) Simplify if necessary

$$\begin{array}{r} 2\frac{1}{4} \cdot \frac{1}{3} \\ 2\frac{1}{4} = \frac{9}{4} \\ \frac{9}{4} \cdot \frac{1}{3} = \frac{3}{4} \end{array}$$

Dividing Fractions and Mixed Numbers:

- 1) Convert mixed numbers to improper fractions
- 2) "Same, Change, Flip" (keep first fraction the same, change division to multiplication, flip second fraction to its reciprocal)
- 3) Cross simplify if possible and then multiply
- 4) Simplify if necessary

$$\begin{array}{r} \frac{3}{7} \div \frac{9}{10} \\ \frac{3}{7} \cdot \frac{10}{9} = \frac{10}{21} \end{array}$$

Adding and Subtracting Decimals:

- 1) Line up decimal points
- 2) Bring the decimal down
- 3) Add or subtract as if numbers are whole numbers

$$\begin{array}{r} 5.2 + 10.03 \\ + 5.2 \\ \hline 15.23 \end{array}$$

Multiplying Decimals:

$$1.03 \times 2.8$$

- 1) Ignore the decimal points
- 2) Multiply as if numbers are whole numbers
- 3) Count the number of decimal places in the problem and move the decimal point in answer that many places

$$\begin{array}{r}
 1.03 \\
 \times 2.8 \\
 \hline
 824 \\
 2060 \\
 \hline
 2884
 \end{array}$$

Dividing Decimals:

$$6.4 \div 1.2$$

- 1) If there is a decimal in the divisor, move it to the end of the number and move the decimal in the dividend the same number of places
- 2) Bring decimal point in dividend straight up.
- 3) Divide. Add zeros to dividend and bring down if necessary.

$$\begin{array}{r}
 5.3 \\
 1.2 \overline{) 6.40} \\
 \underline{60} \\
 40 \\
 \underline{36} \\
 4
 \end{array}$$

Subtraction Equations:

$$14 = x - 7$$

Add the number on the same side of the equal sign as the variable to each side of the equation

$$\begin{array}{r}
 14 = x - 7 \\
 + 7 + 7 \\
 \hline
 21 = x
 \end{array}$$

Addition Equations:

$$x + 3 = 9$$

Subtract the number on the same side of the equal sign as the variable from each side of the equation

$$\begin{array}{r}
 x + 3 = 9 \\
 - 3 - 3 \\
 \hline
 x = 6
 \end{array}$$

Multiplication Equations:

$$5m = 105$$

Divide each side of the equation by the number on the same side of the equal sign as the variable

$$\begin{array}{r}
 5m = 105 \\
 \frac{5m}{5} = \frac{105}{5} \\
 \hline
 m = 21
 \end{array}$$

Division Equations:

$$\frac{y}{13} = 5$$

Multiply each side of the equation by the number on the same side of the equal sign as the variable

$$\begin{array}{r}
 13 \times \frac{y}{13} = 5 \times 13 \\
 \hline
 y = 65
 \end{array}$$