SETON SCHOOL
SUMMER MATH REFRESHER PROGRAM

SIXTH GRADE MATH REVIEW

Many studies have shown that, during the summer, students lose a substantial portion of their math skills acquired over the course of a school year. This puts them at a disadvantage upon returning for a new school year, as the expectations of a new course presuppose the skills and knowledge taught in the previous course.

The Seton math department, in cooperation with the administration, has a program similar to the summer reading program for English. Our hope is that this program will help students transition out of the summer recess and into their new math courses smoothly and with less stress.

We recommend that the sessions be worked gradually over several weeks, perhaps one session done in a day, and two or three days a week. There are ten sessions, each one of which should take about a half hour, though the times will undoubtedly vary among students.

As with summer reading, the work is expected to be done before the new school year starts. You are responsible for keeping your papers and having them ready to turn in the first day. The summer work will count for approximately 5% of your first quarter grade in the next math course. (For this review, that is usually General Math.)

IMPORTANT: It is essential that you show all your work, and that it is organized and legible. Space has been provided for you to work directly on the packet, but you may attach extra loose leaf pages if necessary. You must fill in the answer boxes for each question. Put your name clearly on each page of work. If these conditions are not met, you will not get full credit for your work. Also, I strongly suggest that you scan or copy your papers, so that if you lose your originals, you will have a backup.

SIXTH GRADE MATH REVIEW SESSION 1

Example: In Pablo's sixth grade class there are 18 boys and 16 girls. Give the <u>simplified</u> ratio of boys to girls in his class and express the simplified ratio three different ways.

Answer: $\frac{18}{16} = \boxed{\frac{9}{8} = 9:8 = 9 \text{ to } 8}$

1.	Martha read 21 books last year and Cindy read 15. Write the simplified ratio of the number of books Martha read to the number of books Cindy read, and express the simplified ratio in three different ways.	1.
2.	Express the following as simplified mixed fractions. **a.** 3.75 **b.** 7.38	2.a. 2.b.
3.	Write the following rational numbers in order from least to greatest. $\frac{9}{10},\ 0.35,\ 0.91,\ \frac{4}{5}$	3.
4.	Write the following integers from least to greatest. $-7,\ 16,\ 0,\ -11,\ 12$	4.
5.	Convert to a percent. 0.62	5.
6.	Fill in the blank with >, <, or =. $\lvert -12 \rvert \_\_\_ 9$	6.
7.	Multiply. (Note: The dot, $\cdot$, means multiply.) $\frac{2}{7} \cdot \frac{3}{8}$	7.
8.	Divide. $\frac{8}{15} \div \frac{2}{9}$	8.
9.	Add. $(-13) + 4$	9.
10.	Subtract. $-41 - 7$	10.

SIXTH GRADE MATH REVIEW SESSION 2

1. $6\overline{)3,467}$

2. $\begin{array}{r} 386 \\ \times\ 41 \\ \hline \end{array}$

3. $4\overline{)6.36}$

4. Multiply. Write as a simplified mixed fraction.

$2\frac{1}{3} \cdot 1\frac{1}{2}$

5. Find the circumference of a circle with a diameter of 4 cm. (Use $\pi = 3.14$.)

6. If a wolf travels 81 miles in 6 hours, what is his average speed in miles per hour? In other words, determine the unit rate, miles/1 hour, for the following ratio for distance traveled to time for a wolf in the wild.

$\frac{81\,\text{miles}}{6\,\text{hours}}$

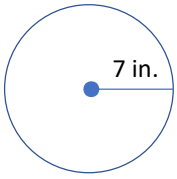
7. Find **a)** the area, and **b)** the perimeter of the following figure.

8. Solve for x.

$3x = 36$

9. Marvin's age is 11. He is one-fourth as old as his father. Write and solve an equation to find the age of Marvin's dad.

10. Find **a)** the area, and **b)** the circumference of the following figure. Use $\pi = 3.14$.



1.
2.
3.
4.
5.
6.
7.a. 7.b.
8.
9.
10.a. 10.b.

SIXTH GRADE MATH REVIEW SESSION 3

1. Divide. Write as simplified mixed number.
   $7\frac{1}{2} \div 5\frac{1}{4}$

1.

2. Divide. Write as simplified mixed number.
   $20 \div 5\frac{1}{3}$

2.

3. Divide. Write as simplified fraction.
   $7\frac{1}{2} \div 30$

3.

4. Carla needs $\frac{8}{9}$ as much protein in her diet as Theo does. Theo should have 54 grams of protein each day. How many grams of protein should Carla have each day?

4.

5. A city band spends $10,000 this year for uniforms. Their total yearly budget is $35,000. What part of this year's total budget is spent on uniforms? Answer as a simplified fraction.

5.

6. Add. Write as a simplified mixed fraction.
   $3\frac{1}{2} + 1\frac{5}{8}$

6.

7. A rye bread recipe calls for a total of $4\frac{1}{2}$ cups of flour, $1\frac{1}{4}$ cups of which is rye flour. The rest is wheat flour. How much wheat flour does the recipe require?

7.

8. Toni buys a makeup kit marked at $16.00. She must also pay a 6% sales tax. What is the total amount she must pay?

8.

9. Clark finds a pair of shoes that he wants to purchase marked at $50.40. The store is having a sale of 30% off all shoes. What is the sale price of this pair of shoes?

9.

10. Evaluate. $-9 + 5 + (-8) - (-16)$

10.

SIXTH GRADE MATH REVIEW SESSION 4

1. Evaluate. $3+4\times7-5$

1.

2. It takes Shawn 12 hours to mow 8 lawns. How long would it take him to mow 10 lawns at the same rate?

2.

3. Write in exponential form.
   $y \cdot y \cdot y \cdot y$

3.

4. $\begin{array}{r} 17.3 \\ \times\ 7.21 \\ \hline \end{array}$

5. $\begin{array}{r} 83.6 \\ -\ 25.48 \\ \hline \end{array}$

4.

5.

6. The distance to the sun is about 150,000,000 kilometers. Write this number using scientific notation.

6.

7. Round to the nearest hundred.
   3,457,761

7.

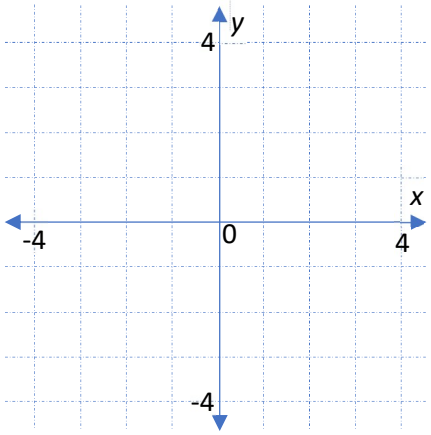
Use the graph to the right to answer 8-10.

8. Graph the point $(3,\ -1)$.

9. Plot any 2 points that satisfy the equation $y = 2x$.
   Then draw a straight line through the two points.

10. Is the point $(-2,\ 4)$ on the line from #9?

Use this graph to answer 8-10.



SIXTH GRADE MATH REVIEW SESSION 5

1. Multiply. Simplify if needed.

   $\frac{2}{3} \cdot \frac{7}{8}$

   1.

2. Add. Simplify if needed.

   $3\frac{4}{5} + 7\frac{3}{10}$

   2.

3. The mean of a set of numbers is the average of the numbers. Find the mean of the following football scores.

   41, 28, 34, 21

   3.

4. Evaluate. Simplify if needed.

   $7\frac{1}{5} \div \frac{4}{15}$

   4.

5. Using ***n*** for the variable, write the following as a mathematical expression.

   3 less than 5 times a number

   5.

6. Solve. Simplify if needed.

   $x - \frac{7}{8} = 1\frac{1}{2}$

   6.

7. Graph the inequality on the number line.

   $x > 3.5$

   7.

8. Divide. Leave remainder in simplified form as a mixed fraction.

   $12\overline{)2,308}$

   8.

9. Write in decimal form.

   $4\frac{3}{4}$

   9.

10. Write in simplified fraction form.

    0.28

    10.

SIXTH GRADE MATH REVIEW SESSION 6

1. Divide. Write as a decimal rounded to the nearest tenth.

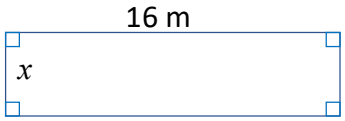
$7\overline{)898}$

1.

2. Write the percent as a decimal: 37.6%.

2.

3. The area of the rectangle below is 72 m^2. Find the missing value, x.

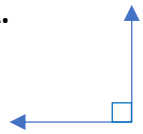


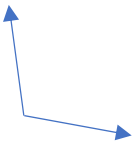
3.

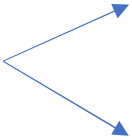
4. Maria is 4 years younger than Zach, who is half his father's age of 62 years. How old is Maria?

4.

5. Match each angle with its proper name.

A. 

B. 

C. 

D. 

w. straight
x. acute
y. obtuse
z. right

5.A.

5.B.

5.C.

5.D.

6. What is the least common denominator of the following fractions?

$\frac{17}{30}, \frac{3}{10}, \frac{5}{12}$

6.

7. $\begin{array}{r} 74 \\ \times\ 39 \\ \hline \end{array}$

8. What is 21% of 150?

7.

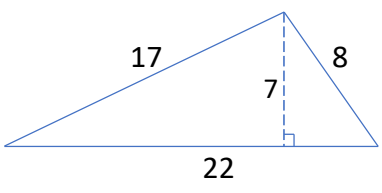
8.

9. Solve the proportion for x.

$\frac{24}{40} = \frac{x}{55}$

9.

10. Find **a)** the area, and **b)** the perimeter of the following figure.



10.a.

10.b.

SIXTH GRADE MATH REVIEW SESSION 7

1. Evaluate each of the following.
   a. 7.854 × 100 **b.** 2.7 × 0.01
   c. 4,500 × 0.001 **d.** 350 × 1,000

1.a.
1.b.
1.c.
1.d.

2. Jan has $4.20 in dimes and quarters. She has twice as many quarters as dimes. How many of each type of coin does she have?

2.

3. How many feet are in $6\frac{1}{3}$ yards?

3.

4. Yesterday, Harold earned $13 less than Anton. If Anton earned $104, how much did Harold earn?

4.

5. The area of a parallelogram is $A = bh,$ where b = base and h = height. Find the area of a parallelogram with a base of 6.5 ft and a height of 4 ft.

5.

6. Add. Simplify if needed.
   $\frac{1}{3}+\frac{1}{2}$

7. Subtract. Simplify if needed.
   $\frac{8}{9}-\frac{4}{15}$

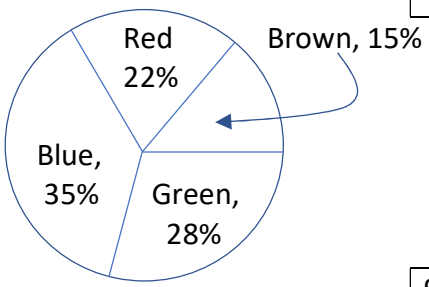
6.

7.

8. Albert left in his will $101,500, to be shared equally among his 7 children. How much money does each child inherit?

8.

Use the following information to answer 9 and 10.
Isabella has a collection of 700 colored buttons.
The pie chart gives percentages of each color.



9. How many of Isabella's buttons are green?

9.

10. If she decides to give away all the red and brown buttons, how many buttons will Isabella have left?

10.

SIXTH GRADE MATH REVIEW SESSION 8

1. Three tickets to the theater cost $27. How much will five tickets cost?

1.

2. 60% of 20 is what number?

2.

3. Subtract. Simplify if needed.

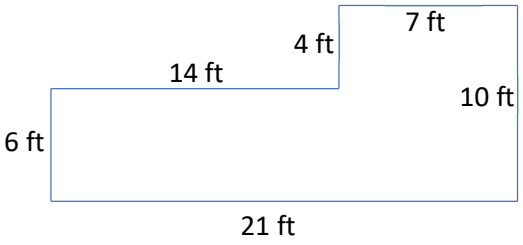
$$4\frac{9}{10}-1\frac{2}{5}$$

3.

4. Giorgio receives $37.00 for four hours work. How many hours must he work to receive $55.50?

4.

5. Find **a.)** the area, and **b.)** the perimeter of the room below. All angles are right angles.



5.a.

5.b.

6. Divide. Use remainder form.

$$9\overline{)2{,}184}$$

7. Divide. Simplify if needed.

$$7\div\frac{4}{7}$$

6.

7.

8. What is 1,000% of 17?

8.

9. The area of the rectangle below is 65 cm^2. Find x.

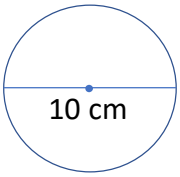
9.

10. Find the perimeter of the figure above.

10.

SIXTH GRADE MATH REVIEW SESSION 9

1. Find **a)** the circumference, and **b)** the area of the circle below. Use $\pi = 3.14$.



1.a.

1.b.

2. How many inches are in 7 feet?

2.

3. How many ounces are in 12 pounds?

3.

4. Which is the likely length of a river?
   300 mm, 300 cm, 300 m, 300 km

4.

5. Which is the likely mass of a can of soup?
   (Note: 1 mcg = 1µg = 1 millionth of a gram)
   425 mg, 425 g, 425 kg, 425 mcg

5.

6. $\begin{array}{r} 21.8 \\ \times\ 0.37 \\ \hline \end{array}$

7. $\begin{array}{r} 30.372 \\ -18.56 \\ \hline \end{array}$

6.

7.

8. $7.5\overline{)306.75}$

9. $\begin{array}{r} 3.7 \\ 15.02 \\ 0.78 \\ +\ 9.83 \\ \hline \end{array}$

8.

9.

10. Write the numbers in order from least to greatest.
    $1\frac{7}{10}, \frac{5}{3}, \frac{9}{5}, 1\frac{1}{2}$

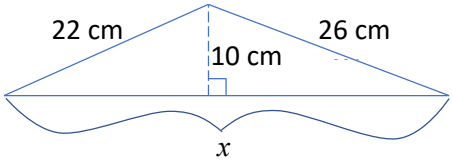
10.

SIXTH GRADE MATH REVIEW SESSION 10

1. What number is 28% of 275?

1.

2. The perimeter of the figure below is 92 cm. Find **a)** x, and **b)** the area of the figure.



2.a.

2.b.

3. Evaluate. Simplify if needed.

$$3\frac{3}{4}+7\frac{7}{8}$$

3.

4. Josey owns a shoe store. She buys one pair of shoes wholesale for $35.00 and sells the same pair of shoes for $56.00.
a) Find Josey's profit on the shoes in dollars.

b) Find her profit as a percent of her cost.

4.a.

4.b.

5. Evaluate. $-6+2\cdot(-3)+15$

5.

6. Jackie earned $4,500 working as a cashier during her junior year. During her senior year, she earned $1,750 more than she earned during her junior year. How much money did Jackie earn during her senior year?

6.

7. Multiply. Simplify if needed.

$$\frac{7}{11}\cdot 1\frac{1}{7}$$

7.

8. Evaluate. $(-2)\cdot 10\cdot(-12)$

8.

9. What is $\frac{2}{3}$ of 120?

9.

10. Subtract. Simplify if needed.

$$6\frac{5}{12}-2\frac{1}{4}$$

10.

END OF REVIEW