

O.L. Smith Summer Learning Expectations

According to Johns Hopkins University, the effects of summer learning loss can result in nearly a 3-month loss in grade-level equivalency in math and a 2-month loss in grade-level equivalency in reading. In an effort to try and avoid any further loss, all O.L. Smith MS students who will not be attending the summer program will have the following expectations to complete for ELA and Math classes.

ELA

Students will be expected to complete the following tasks:

- 1) Choose a book from the provided list.
- 2) Pre-reading Task: Students should read this article How Do I Look before reading their chosen book.
- 3) During and After Reading Task: * Students make a copy of this Note-taker, complete notes as they read, and save the slideshow in their Google Drive for future use.
*Those students attending summer school will use the selected Summer Program novel to complete the assignment in the fall.
- 4) Post-reading Task: Students will complete a task in the fall with their ELA class to reflect upon both their Summer Reading Novel and compare it to the identity article.

- 5) Please sign in to IXL and complete skill practices at your current grade level for additional support or enrichment.

Reading Choices: Students download a copy via Sora (see link for directions) OR open PDF using the link provided.

(Students who need easy access to reading this summer should remember that SORA ebook reader is available 24/7! The free app can be downloaded onto any phone, tablet, or PC, although googling "sora" and choosing "soraapp.com" will take you there as well. Students can read thousands of books and audiobooks and add the Dearborn Public Library to add even more choices. There's always something new to read on SORA! (click on the link for a how-to video on SORA: <https://youtube.be/FwrFgQxguZU>) Happy Summer Reading!)

Math

Students will be expected to complete the following task in math:

Incoming 6th Graders	Current Middle School Students
<ul style="list-style-type: none"> • <u>Math packets</u> to be distributed by current 5th-grade teachers. • Packets are due the first week of school. <ul style="list-style-type: none"> ❖ Use a pencil ❖ Show your work ❖ Circle your answer 	<ul style="list-style-type: none"> • At least 10 <i>I-Ready My Path Lessons</i> <i>Suggestion: complete 1-2 lessons a week.</i> • My path lessons are due August 13, 2021.

Please remember to pace yourself. This assignment will be graded by your teachers in the Fall.

* Powerpoint with expectations linked to the title.

**O.L. Smith Middle School
Incoming 6th Grade Summer Math Packet**

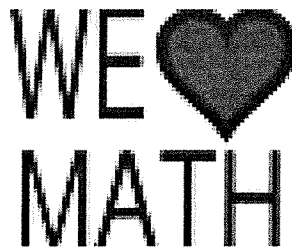
Welcome incoming Vikings! This packet will help you retain the skills you learned in your fifth grade math class.

Please show all your work and steps using a pencil and circle your answers for each problem.

This packet is due the first week of school.

We look forward to meeting you!

The Smith Vikings' Math Team



Addition

Find the sum of the two numbers in each problem.
Show all work.

Example:

$$\begin{array}{r} 1 \quad 1 \\ 4 \quad 4 \quad 8 \\ + 1 \quad 8 \quad 8 \\ \hline 6 \quad 3 \quad 6 \end{array}$$

1. $\begin{array}{r} 652 \\ + 345 \\ \hline \end{array}$

2. $\begin{array}{r} 203 \\ + 525 \\ \hline \end{array}$

3. $\begin{array}{r} 726 \\ + 268 \\ \hline \end{array}$

Decimal Addition:

Remember to line up the decimals before adding. Bring the decimal straight down in your answer.

4. $\begin{array}{r} 7.75 \\ + 1.46 \\ \hline \end{array}$

5. $51.4 + 2.86$

6. $.1274 + 8.25$

Subtraction

Find the difference between the two numbers in each problem. Show all work.

Example:

$$\begin{array}{r} 3 \quad 13 \\ 7 \quad 4 \quad 3 \\ 2 \quad 1 \quad 8 \\ - \\ \hline 5 \quad 2 \quad 5 \end{array}$$

7. $\begin{array}{r} 407 \\ - 198 \\ \hline \end{array}$

8. $\begin{array}{r} 7,007 \\ - 2,426 \\ \hline \end{array}$

9. $\begin{array}{r} 3,414 \\ - 1,218 \\ \hline \end{array}$

Decimal Subtraction:

Remember to line up the decimals before subtracting. Bring the decimal straight down in your answer.

10. $\begin{array}{r} 338.38 \\ - 149.27 \\ \hline \end{array}$

11. $80.401 - 44.23$

12. $75.89 - 9.4$

Multiplication

Find the product of the two numbers in each problem. Show all work.

Example:

$$\begin{array}{r} 54 \\ \times 16 \\ \hline 324 \\ + 540 \\ \hline 864 \end{array}$$

13.

$$\begin{array}{r} 65 \\ \times 4 \\ \hline \end{array}$$

14.

$$\begin{array}{r} 42 \\ \times 8 \\ \hline \end{array}$$

15.

$$\begin{array}{r} 84 \\ \times 39 \\ \hline \end{array}$$

Decimal Multiplication:

Multiply as you would with whole numbers. Count the decimal places in each factor. The product (answer) has the same number of decimal places.

16.

$$\begin{array}{r} .13 \\ \times 70 \\ \hline \end{array}$$

17.

$$\begin{array}{r} 5.1 \\ \times 2 \\ \hline \end{array}$$

18.

$$\begin{array}{r} .108 \\ \times 2.5 \\ \hline \end{array}$$

Division

Find the quotient in each problem. If there is a remainder, state the remainders as R=____. Show all work. Feel free to use a separate sheet of paper.

19.

$$7 \overline{)591}$$

20.

$$12 \overline{)264}$$

21.

$$43 \overline{)2815}$$

Decimal Division:

If the divisor (outside number) is a decimal, you must move the decimal point (using multiplication) to the right until it becomes a whole number. Then, move the decimal in the dividend (inside number) the same number of times. Divide to find your answer (quotient).

Then, move the decimal straight up from the dividend to the quotient.

$$\begin{array}{r} \text{quotient} \\ \text{divisor} \overline{) \text{dividend}} \end{array}$$

Remember, no remainders.

22.

23.

24.

$$3 \overline{) 31.8}$$

$$.5 \overline{) 7.45}$$

$$.12 \overline{) 12.24}$$

Rounding

Underline the given place value. Look to the right. If this digit is 5 or greater, increase the underlined digit by 1. If the digit to the right is less than 5, keep the underlined digit the same.

Round to the nearest...

hundredth

0.547 0.55



Round to the nearest....

25. tenth
0.3479

26. hundredth
0.7553

27. whole number
3.268

28. ten
162.21

29. thousandth
0.0036

30. hundred
990.54

Compare using <, >, or =

1.2 1.20 1.2 = 1.20

Compare the decimals.

31. 0.205 0.21

32. 1.03 0.03

33. 0.04 0.050

34. 0.1 0.1000

35. 0.52 0.500

36. 0.41 0.405

Prime Number: A whole number greater than 1 that has only two factors, 1 and itself.
Examples: 2, 3, 5, 7, 11, 13, 17, and 19 are all prime numbers.

Composite Number: A whole number greater than 1 that has more than two factors.
Example: 8 is a composite number since its factors are 1, 2, 4, 8.

Determine if the following numbers are prime or composite. If the numbers are composite, please list all of the factors.

37. 27: _____

38. 39: _____

39. 43: _____

40. 49: _____

Exponents

A way to show repeated multiplication by the same factor is to use an exponent. In this example: $2^3 = 2 \times 2 \times 2 = 8$. The small raised three is the exponent. It tells how many times the number 2, called the base, is multiplied by itself.

Solve the following expressions by writing the expanded notation (repeated multiplication) and find the value.

41. 6^2

42. 2^6

43. 3^4

44. eight squared

45. five cubed

Greatest Common Factor

The greatest factor that two or more numbers have in common (GCF).

1. List all the factors of **four** in order
2. List all the factors of **twenty** in order
3. List the common factors
4. Write the greatest common factor

Finding Common Factors:

4: 1, 2, 4

20: 1, 2, 4, 5, 10, 20

Common Factors: 1, 2, 4 GCF= 4

List all the factors for each number. Circle the common factors.

46. 18 : _____

30 : _____

Common Factors: _____ Greatest Common Factor: _____

47. 60 : _____

45 : _____

Common Factors: _____ Greatest Common Factor: _____

48. 23: _____

29: _____

Common Factors: _____ Greatest Common Factor: _____

49. 56: _____

72: _____

Common Factors: _____ Greatest Common Factor: _____

Least Common Multiple

The smallest nonzero multiple that two or more numbers have in common.

1. List the multiples of each number until you reach a common multiple in the two numbers.
2. Write the least common multiple.

Finding Common Multiples:

4: 4, 8, 12, 16, 20, 24

6: 6, 12, 18, 24, 30, 36

Least Common Multiple= 12

50. 8 : _____

12 : _____

Least Common Multiple: _____

51. 7 : _____

11 : _____

Least Common Multiple: _____

52. 25 : _____

10 : _____

Least Common Multiple: _____

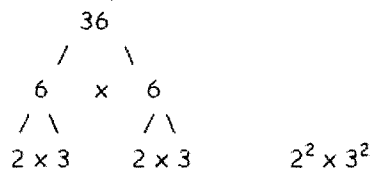
53. 24 : _____

36: _____

Least Common Multiple: _____

Prime Factorization is a composite number renamed as a product of prime numbers. You may make a factor tree to find the answer. Put final answer in exponent form.

Find the prime factorization of 36.



54.

180

55.

525

56.

91

57.

48

Comparing Fractions

Compare each pair of numbers. Write the correct comparison symbol ($<$, $>$, $=$) in each circle. Make sure you have common denominators before comparing numerators.

Example:

$$\begin{array}{ccc} \frac{1}{3} & \bigcirc & \frac{3}{4} \\ \downarrow & & \downarrow \\ \frac{4}{12} & & \frac{9}{12} \end{array}$$

58.

$$\frac{3}{8} \bigcirc \frac{5}{8}$$

59.

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

60.

$$\frac{1}{2} \bigcirc \frac{4}{8}$$

61.

$$\frac{3}{7} \bigcirc \frac{1}{4}$$

62.

$$\frac{3}{5} \bigcirc \frac{5}{6}$$

63.

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

Ordering Fractions

Order the following fractions from **least to greatest**.

Write answers in ORIGINAL format.

64.

$$\frac{3}{8} \quad \frac{5}{8} \quad \frac{4}{8} \quad \frac{2}{8} \quad \frac{7}{8}$$

65.

$$\frac{1}{5} \quad \frac{4}{5} \quad \frac{1}{10} \quad \frac{6}{10} \quad \frac{7}{10}$$

66.

$$\frac{1}{2} \quad \frac{1}{4} \quad \frac{1}{6} \quad \frac{1}{3} \quad \frac{1}{5}$$

67.

$$\frac{1}{2} \quad \frac{5}{16} \quad \frac{30}{64} \quad \frac{3}{8} \quad \frac{9}{32}$$

Order of Operations

Solve the following problems. Show your work. Be sure to follow the order of operations.

Parenthesis

Exponents

Multiplication or Division: Which ever comes first from left to right.

Addition or Subtraction: Which ever comes first from left to right.

Example: $8 - 4 \div 2 + 2 =$

$$8 - 2 + 2 =$$

$$6 + 2 =$$

$$8$$

68. $15 \times 8 - 3 =$

69. $36 \div 4 \times 3 =$

70. $(30 + 8) \times 6 - 1 =$

71. $(30 + 8) \times (6 - 1) =$

72. $(29 - 18) + 14 \div 2 + 6 =$

73. $64 \div 8 \times 2$

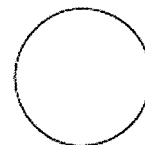
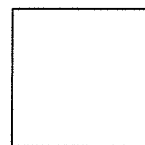
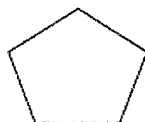
74. $36 - 5(16 - 11) =$

75. $25 + 18 \div 6 - 1 =$

76. $24 + 6^2 - 1^4 =$

Geometry-Who am I?

Use the following shapes to answer the questions below.



77. I am a 2 dimensional shape that has four sides. I have four 90 degree angles. I have two sets of parallel lines. I also have two sides that are one length, and my other two sides are a different length.

Who am I? _____

78. I am a 2 dimensional shape that has three acute angles. All of my sides are the same length. I have no parallel sides.

Who am I? _____

79. I am a 2 dimensional shape that has four sides. I have two obtuse angles and two acute angles. I have two different sets of parallel sides. I also have two sides that are one length, and my other two sides are a different length.

Who am I? _____

80. I am a 2 dimensional shape that has 5 obtuse angles. I do not have any sides that are parallel.

Who am I? _____

81. I am a 2 dimensional shape that has four 90 degree angles. I have four sides that are all the same length. I have two different sets of parallel lines.

Who am I? _____

82. I am a 2 dimensional shape. My perimeter is also known as a circumference.

Who am I? _____

Simply Fractions

Simplify the following fractions. If the fractions are improper, change them to mixed numbers then simplify.

Example: $\frac{10}{25} \div 5 = \frac{2}{5}$

83.

$$\frac{14}{28}$$

84.

$$\frac{15}{55}$$

85.

$$\frac{12}{51}$$

86.

$$\frac{34}{48}$$

87.

$$\frac{17}{4}$$

88.

$$\frac{80}{25}$$

Adding Fractions and Mixed Numbers

Add the following fractions. Make sure you have common denominators before adding. Remember, you only add the numerator (top number) and you keep the denominator (bottom number) the same! Simplify your final answers.

Example:

$$\begin{array}{r} \frac{1}{3} + \frac{1}{5} = \\ \downarrow \quad \downarrow \\ \frac{5}{15} + \frac{3}{15} = \frac{8}{15} \end{array}$$

89.

$$\frac{6}{10} + \frac{3}{10} =$$

90.

$$2\frac{3}{8} + 1\frac{2}{8} =$$

91.

$$\frac{1}{9} + \frac{5}{6} =$$

92.

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

Subtracting Fractions

Subtract the following fractions. Make sure you have common denominators before subtracting. Remember, you only subtract the numerator (top number) and you keep the denominator (bottom number) the same! Simplify your final answers.

Example:

$$\begin{array}{r} \frac{5}{6} - \frac{1}{3} = \\ \downarrow \quad \downarrow \\ \frac{5}{6} - \frac{2}{6} = \frac{3}{6} = \frac{1}{2} \end{array}$$

93.

$$\frac{5}{6} - \frac{3}{6} =$$

94.

$$2\frac{8}{12} - 1\frac{3}{12} =$$

95.

$$\frac{7}{10} - \frac{2}{4} =$$

96.

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

Multiplying Fractions

Multiply the following fractions. Multiply the numerators; then multiply the denominators. Simplify, if necessary.

Example:

$$\frac{3}{5} \times \frac{5}{9} = \frac{15}{45} = \frac{1}{3}$$

97.

$$\frac{3}{4} \times \frac{1}{3} =$$

98.

$$\frac{2}{3} \times \frac{5}{8} =$$

99.

$$\frac{1}{3} \times \frac{2}{5} =$$

100.

$$\frac{7}{8} \times 2 =$$