

Dear Parents/Guardians and Students

We hope you are enjoying a restful and relaxing summer vacation. Although it may not seem possible, the school year is rapidly approaching. Similar to the summer reading program developed by the English Language Arts Department, the Nissitissit and Hawthorne Brook Middle School Mathematics teachers have developed a packet for students to complete prior to the start of school.

This packet covers skills learned by your child in last year's math class. The primary motivation for this packet is to refresh and maintain these skills so that less class time in September is spent on review. No concept in this packet should be new to your child.

We recommend that you and your child work together twice a week for approximately 35 minutes/sessions to complete this packet by the start of school. Please do and **show all** work in pencil, no calculators are to be used. We encourage you to assist your child as needed. The following websites may also be useful in assisting your child: www.purplemath.com and www.coolmathalgebra.com. This packet will be collected within the first week of school and will be scored as a **quiz grade**.

We thank you very much for the effort and support in making the start of the school year a success. We hope you enjoy the remainder of summer vacation, and we look forward to working with your child this fall.

Sincerely,

Nissitissit and Hawthorne Brook
Grade 7 Math Teachers

IMPORTANT: Complete all problems 1 – 72. SHOW ALL COMPUTATIONAL WORK. Follow all directions as given.

Add the following fractions: Simplify.

1. $\frac{7}{8} + \frac{3}{5}$

2. $\frac{5}{6} + \frac{4}{9}$

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

Subtract the following fractions: Simplify.

4. $\frac{13}{16} - \frac{3}{8}$

5. $\frac{9}{16} - \frac{1}{4}$

6. $8\frac{2}{7} - 3\frac{2}{3}$

Multiply the following fractions: Simplify.

7. $\frac{5}{8} \cdot \frac{3}{4}$

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

9. $\frac{9}{7} \cdot \frac{2}{3}$

Divide the following fractions: Simplify.

10. $6\frac{1}{2} \div \frac{1}{4}$

11. $4\frac{3}{8} \div 1\frac{3}{4}$

12. $7\frac{2}{3} \div \frac{2}{9}$

Convert the following fractions to decimals.

13. $\frac{5}{6}$

14. $2\frac{2}{3}$

15. $\frac{7}{9}$

16. $1\frac{1}{5}$

17. $\frac{12}{13}$

18. $3\frac{1}{8}$

Convert the following decimals to fractions.

19. .81

20. 2.06

21. .059

Arrange the following decimals in order from least to greatest.

22. ** .369, .3, .069, 3.09, .24 **

23. ** 1.7, 1.07, 1.37, .39, .016 **

Add the following decimals:

24. $16.04 + 32.70$

25. $5.039 + .36 + 15.032$

26. $.3056 + .06 + .253$

Subtract the following decimals:

27. $16.362 - 11.56$

28. $.362 - .32$

29. $7.36 - 1.84$

Multiply the following decimals:

30. $6.09 \cdot .34$

31. $3.26 \cdot .436$

32. $.534 \cdot 6$

Divide the following decimals:

33. $6.497 \div 8.9$

34. $81 \div 5.4$

35. Round the quotient to the nearest hundredth: $16.4 \div .063$

36 – 40. Raise the following to the indicated power:

5^3

6^2

3^5

$(.26)^2$

$\left(\frac{3}{5}\right)^2$

41 - 46. Convert to the equivalent fractions with a common denominator and place in order from least to greatest.

$\frac{3}{4}$

$\frac{5}{6}$

$\frac{1}{2}$

$\frac{3}{8}$

$\frac{2}{3}$

$\frac{7}{12}$

47. Find the mean, median, and mode of the following data set. Show all work. Round answers to the nearest hundredth.

Height of students in inches

51, 45, 47, 48, 50, 50, 52, 46, 50, 47, 50, 56, 52

48. What is the range of the data set above?

Use the Order of Operations to simplify the following expressions. (PEMDAS)

49. $60 \div 4 + 9$

50. $2[8 + (5 - 3)] - 7$

51. $36 - 27 \div 9 \div 3$

52. $2^3 + 4 \cdot 7$

53. $[7(5 + 2) - 3]$

Insert parentheses to make each equation true.

54. $7 + 5 \cdot 8 = 96$

55. $9 \cdot 8 - 6 + 4 = 22$

Use $>$, $<$, or $=$ to complete each statement. (PEMDAS)

56. $12 \div 3 + 9 \cdot 4$ $12 \div (3 + 9) \cdot 4$

57. $(17 - 13) \div 2^2$ $[(17 - 13) \div 2]^2$

Write the Prime Factorization of the following numbers:

58. 99

59. 120

60. 45

Find the Least Common Multiple (LCM) of the following numbers:

61. 18 and 60

62. 8, 10, and 12

63. 14 and 21

Find the Greatest Common Factor (GCF) of the following numbers:

64. 30 and 105

65. 28 and 70

66. 48 and 72

Use the formulas below to solve the following problems.

Use $\pi = 3.14$ or $\frac{22}{7}$.

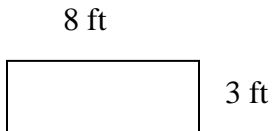
Perimeter of a Rectangle = $2l + 2w$

Circumference of a Circle = πd or $2\pi r$ (r = radius and d = diameter)

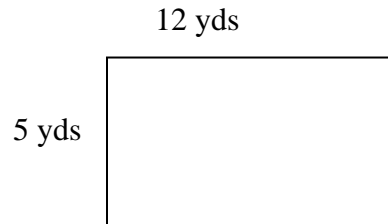
Area of a Circle = πr^2

Area of a rectangle = $b \cdot h$

67. Find the perimeter >

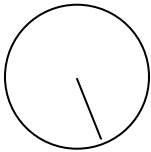


68. Find the area.



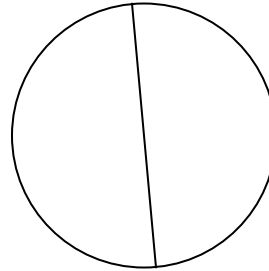
69. Find the circumference.

$r = 5$ in



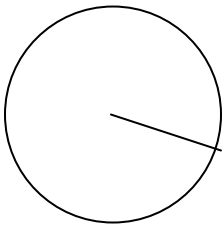
70. Find the circumference.

$d = 20$ ft



71. Find the area.

$r = 12$ cm



72. Find the area.

$d = 16$ m

