

Clifton High School

Mathematics

Summer Workbook

Geometry

The questions/problems in this booklet have been compiled by past and present CHS mathematics teachers based on open resources from publishers and math websites such as NCTM.

Completion of this summer work is required for the first day of the school year.

Date Received: _____

Date Completed: _____

Student Signature: _____

Parent Signature: _____

Dear Parents and Guardians,

Attached is the mathematics workbook that your child is required to work on over the summer. Our goal is that your child will continue to work on appropriate math skills and concepts to maintain the progress made during the previous grade. This workbook will help prepare your child for the next level.

Please sign to indicate the date the workbook was received and the date it was completed. Encourage your child to work through the booklet a section at a time during July and August.

Your child's math teacher will collect the workbook during the first week of school. Giving time and thought to this work will help to maximize your child's grade on the test given in September. The test will be based on the work shown and will count as the first test of the school year. The grade will be determined as follows:

- Completion of the packet on time will count as 20% of the grade.
- Performance on the test will count as 80% of the grade.

Thank you for your anticipated cooperation.

Sincerely,

Michael Doktor
CHS Principal

Mary Campbell
Supervisor of Mathematics 9-12

SECTION 1: SIGNED NUMBERS, COMBINING LIKE TERMS, AND ORDER OF OPERATIONS

Complete exercises in the space provided

Questions	Answers
1) Simplify: $(-7)(-3)+(-2)^2 +(-16)(2)$	1.
2) Simplify: $14(-3y) - (-3y)-(5y)$	2.
3) Simplify : $4[3x +(-2x)]-5(3x+2x)$	3.
4) Evaluate $(5+j)^2 \div k + m^2$ using $j=4,k=9,m=20$.	4.
5) Evaluate $3 a - b + 2 c - 5 $ if $a = - 2$, $b = -4$, & $c = 3$.	5.
6) Find the next three numbers in the sequence. 2, 6, 14, 30,..	6.
7) Find the distance between A(-4, 6) and B(5, 7).	7.
8) Find the coordinates of the midpoint of a segment with the given endpoints. J (5, 6) and K(3, 8)	8.
9) Find the value of x if B is between A and C, $AB = 4x - 9$, $BC = 3x + 5$ and $AC = 17$.	9.
10) The length of a rectangle is $2x-5$ and its width is $x+9$. Express the perimeter of the rectangle.	10.

SECTION 2: FUNCTIONS, EQUATIONS, AND INEQUALITIES

Questions	Answers
1) Write an equation whose slope = -3 & y-intercept = 9.	1.
2) Write an equation whose slope and y-intercept are respectively: $m = -\frac{7}{9}$ and y-intercept = 2	2.
3) Find the slope and y-intercept of the line whose equation is $y + 3x = 12$.	3.
4) Find the x and y-intercepts of the line whose equation is $3x + 5y = -15$.	4.
5) Write an equation of the line which has the given slope and passes through the given point. $m = -5$; (9,1).	5.
6) Solve each inequality. $x - 17 > 12$	6.
7) $-6y + 13 < -7$	7.
7) Find the value of x. $2(x-3) - 17 = 13 - 3(x+2)$	8.
9) The measures of two complementary angles are x and $2x + 12$. Find the measures of the angles.	9.
10) Find the area and perimeter of the square with a side measure 9cm.	10.

SECTION 3: OPERATIONS WITH MONOMIALS, POLYNOMIALS, FACTORING,

AND SIMPLIFYING RADICALS

Questions Simplify:	Answers
1) $\frac{72x^5y^8z^5}{-12xy^2z^3}$	1.
2) $(5xy^4)^2$	2.
3) $\frac{-15y^3 + 15y^2 + 45y}{-15y}$	3.
4) $(3x+1)(3x-1)$	4.
5) $(x + 9)(x - 9)$.	5.
Factor each of the following: 6) $6x - 18$	6.
7) $x^2 - 12x + 36$	7.
8) $x^2 - 12x + 20$	8.
Simplify each of the following: 9) $3\sqrt{9} + 5\sqrt{4}$	9.
10) $(2 + \sqrt{7})(9 + \sqrt{7})$	10.