NORTHEAST CONSORTIUM

Principles of Geometry and Algebra

Summer Pre-View Packet

DUE THE FIRST DAY OF SCHOOL

The problems in this packet are designed to help you review topics from previous mathematics courses that are important to your success in

PGA

DO ALL PROBLEMS WITHOUT A CALCULATOR. Show all work that leads you to each solution on separate sheets of paper. You may use your notes from previous mathematics courses to help you. You must do all work without any help from another person. Additional copies of this packet may be obtained from the Main Office in your school or printed from the school's website.

Springbrook: www.springbrookmath.org
Paintbranch: www.mcps.k12.md.us/schools/paintbranchhs
Blake: www.mcps.k12.md.us/schools/blakehs

ALL work should be completed and ready to turn in on the FIRST DAY of school. This packet will count as part of your first quarter grade.

ENJOY YOUR SUMMER!! WE ARE LOOKING FORWARD TO SEEING YOU IN THE FALL.

Student Name: _____

School: _____

Date: _____

Name: _____

Use a separate sheet of paper to show your work for all problems.

I. Solve these equations and check your answers.

1. y - 8 = 17

2. 3x = 21

3. $\frac{x}{4} = -3$

4. 7(x + 5) = 11 + x

5. 4n + 5 = -19

6. 10d - 15 + 6d = 25

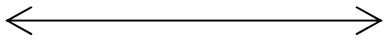
7. $\frac{3}{2}y = \frac{5}{4}$

8. $\frac{5}{6}m = -6\frac{1}{4}$

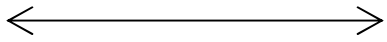
9. 2y + 3(4y + 5) = -6

II. Solve and graph (on a number line) the solution for the inequalities.

10. 2c – 6 > 4



11. 2w - 5 + w < -4



III. Translating: For each algebraic expression, write a mathematical phrase. Use 'x' for 'a number.'

12. Seven more than three times a number.

13. Nine less than a number.

IV. Graph each line. Use graph paper if you have it.

14. $y = \frac{1}{2}x - 5$

15. y = -3x +2

V. Solve each system of equations

16. x + y = 6
    x - y = 4

17. Write and solve a system of equations for the following problem. Identify your variables.

Michelle was shopping at the mall for summer clothes. Two shirts and one pair of shorts cost $65. Three shirts and

two pair of shorts cost $110. Michelle wants to know the cost of one shirt and one pair of shorts.

VI. Multiply and simplify.

18. $3(2x + 2)$

19. $(y + 2)(y – 6)$

20. $(2w + 3)^2$

21. $(6x – y)(4x + y)$

VII. Slope: Using the formula, calculate the slope of a line that passes through the points. Simplify your answer to LOWEST TERMS. SHOW WORK!!

Slope formula $m = \frac{y_2 - y_1}{x_2 - x_1}$

22. (3, 5) (4, 2)

23. (-3, 2) (3, -8)

24. (2, 3) (4, 3)

VIII. Statistics

25. The amounts listed below are the various costs for tuition from many of Tom's favorite colleges and universities.

$13,995; $9,985; $10,180; $15,325; $9,995; $11,150; $10,345; $12,550

Find the …

a) Mean b) Median c) Mode d) Range