

PS duPont Middle School

Welcome to Honors Fast Math Geometry!

Dear students and parents,

In order for you to be as successful as possible during the next school year, I have put together some review work for you to complete this summer. This material should be familiar to you since it was covered in your Algebra class in 7th grade. On the **Summer Assignments** tab of my teacher page, there are links to Algebra notes for each section of the review assignment. Please note that there is also a tab for a **Course Supply List** for Geometry. If there are any problems that you are unable to complete on your own, now is the time to seek help from family members, friends, or possibly tutors. Don't forget that you also have access to IXL Math over the summer!

Do not wait until the week before school starts to begin this review work. Do not use a calculator, show all work, and circle your answers. If you require more space than what is given, complete the problem on a separate sheet of paper and attach it to the review packet.

Do your best to complete each exercise and make sure all of your work is presentable. **This is a required assignment of the Honors Fast Math Geometry course and it should be brought into school on the first day. We will be spending the first 3-5 days of school reviewing these topics and then I will administer a review test.**

If you have any questions, please email me at james.fitzhugh@bsd.k12.de.us anytime throughout the summer.

Enjoy the rest of your summer and I look forward to seeing you at the end of August!

Mr. Jamie Fitzhugh

Fast Math Geometry Teacher

Fast Math Geometry Supply List

1½ inch 3-ring binder [Heavy Duty]

At least 2 spiral notebooks [3-hole punch]

Loose Leaf Paper and at least 100 index cards (3x5)

Pencils, Ruler, and Scientific Calculator (We will use a TI-30X IIS in class.)

Recommended: 3-hole punch pencil pouch for your binder

Donations of tissues, pencils, or eraser tops would be much appreciated.

Section I: Solving Linear Equations

Solve and check each equation. Show all work and circle your answer.

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

2. $d - 3d + 13 = 7d - (d + 3)$

3. $\frac{5}{6}v - \frac{1}{3} = \frac{3}{4}v + \frac{1}{6}$

4. $3(2y - 8) = 4 - 2(3y - 4)$

Solve for the indicated variable.

5. $9x - 3y = 10$ for y

6. $y = mx + b$ for x

Section II: Solving Inequalities

Solve and check each inequality. Graph the solution on a number line.

7. $-7y + 9 > 51$

8. $5(x - 4) < 6x + 8 + x$

9. $-3x+2>14$ or $7x-8\geq-1$

10. $\frac{1}{2}y+8\leq 9$ and $-\frac{2}{3}y+6<10$

Section III: Solving Systems of Equations

Solve and check each system of equations.

11.
$$\begin{cases} x - y = 5 \\ 3x + y = 3 \end{cases}$$

12.
$$\begin{cases} 2x + 4y = 26 \\ x + y = 8 \end{cases}$$

13.
$$\begin{cases} 3x + 2y = 10 \\ -7x + 2y = 30 \end{cases}$$

14.
$$\begin{cases} 9x - 8y = 4 \\ 2x - 3y = -4 \end{cases}$$

Section IV: Simplifying Polynomials

Add, subtract, or multiply as indicated. Write each answer in simplest form.

15. $(6c + 4d - 2) + (-3c - 8d + 2)$

16. $(w^2 - 8w + 2) - (-5w^2 + 7w + 3)$

17. $(5x + 3)(3x - 2)$

18. $(x - 7)(x + 7)$

19. $(2x - 5)^2$

20. $(2x^2 - 5)(2x^2 - x + 5)$

Section V: Factoring Polynomials

Factor if possible. If not, write prime.

21. $6j^2 - 3jkm$

22. $m^2 - 7m + 12$

23. $v^2 - 18v + 36$

24. $6x^2 + x - 15$

25. $4xy + x + 12y + 3$

26. $27p^3 - 75p$

Section VI: Solving Equations by Factoring

Solve by factoring. Check your solution(s).

27. $x^2 + 10x - 39 = 0$

28. $x^2 + 16 = 52$

29. $2x^2 - 5x = 3$

30. $x^2 = 5 - 4x$

31. $16x^2 = 24x$

32. $x^2 = 77 + 4x$

33. $2x^2 + 3x = 20$

34. $3x^2 + 2x = 5$