Optional Summer Assignment
Course Title: Intensified Geometry

Point of contact: Ms. Shivers

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Purpose of Assignment:

It is designed to allow you to review the material that you have already covered in your Algebra 1 course. Since the Intensified Geometry curriculum uses ideas found throughout Algebra 1 in more complex problems, it is paramount that you have a solid understanding of basic concepts.

Estimated time to complete Assignment: 4-6 hours

Due date and method of assessment for Assignment:

This assignment will not be collected for a grade, but there will be a quiz covering the material during the 2nd week of the school year. Only students who complete all of the problems with work shown by the date of the quiz will be eligible for a retake of the quiz. **You are expected to be able to complete all of the questions without the use of a graphing a calculator (non-graphing calculators are fine).**

You will be permitted to use a NON-GRAPHING Calculator on the quiz

Instructions for Assignment:

All work must be done neatly on your **own paper except for graphs which may be done on the graphs provided on the worksheet.** Make sure each page of your work is labeled with the corresponding topic name. Answers to problems must be circled to facilitate grading. Most importantly, the work should be neat! Remember this assignment is not collected for a grade, but only students who complete the assignment will be able to retake the quiz.

****Help videos can be found at www.tinyurl.com/wrightgeometry****

Even though you should be able to complete all the questions without the use of a graphing calculator it is suggested that you have your own graphing calculator (TI-83 or TI-84) for this course.

We look forward to seeing you in September!

-Ms. Shivers & the Washington-Lee Math Department ☺

Directions 1-10: Perform the multiplication.

1. $3(5x + 1)$
2. $-12(3w - 2)$
3. $4y(2y + 7)$
4. $-2x(3x - 5)$
5. $(q - 2)(q + 3)$
6. $(b - 2)(b - 5)$
7. $(x + 1)(x + 3)$
8. $(3g + 5)(g - 3)$
9. $(4x - 5)(2x - 3)$
10. $(6z - 7)(2z + 1)$

Directions 11-30: Factor the expression.

11. $15x + 3$ (hint see #1)
12. $6y + 28$
13. $-10w + 30$
14. $2g^2 - 4g$
15. $-6k^2 - 3k$
16. $24m^2 - 14m$
17. $q^2 + q - 6$ (hint see #5)
18. $y^2 + 15y + 36$
19. $d^2 - 12d + 27$
20. $x^2 - 5x - 14$
21. $y^2 + 22y + 40$
22. $h^2 + 2h - 63$
23. $x^2 - 11x + 18$
24. $3g^2 - 4g - 15$ (hint: see #8)
25. $2x^2 + 7x - 30$
26. $5x^2 - 32g + 12$
27. $4w^2 + 17w + 4$
28. $12y^2 + 32y + 21$
29. $6g^2 - 23g + 20$
30. $18y^2 + 21y - 4$

Non-Graphing Calculators Allowed On Quiz

Directions 1-18: Simplify the expression.

1. $\sqrt{12}$
2. $\sqrt{54}$
3. $\sqrt{180}$
4. $\sqrt{1500}$
5. $\sqrt{864}$
6. $\sqrt{2450}$
7. $5(6\sqrt{3})$
8. $-2(\sqrt{12})$
9. $4(\sqrt{48})$
10. $-7(\sqrt{250})$
11. $(\sqrt{3})(\sqrt{2})$
12. $(-\sqrt{5})(\sqrt{10})$
13. $(\sqrt{6})(-\sqrt{18})$
14. $(\sqrt{24})(\sqrt{72})$
15. $(-2\sqrt{5})(7\sqrt{3})$
16. $(6\sqrt{6})(4\sqrt{2})$
17. $(6\sqrt{14})(8\sqrt{21})$
18. $(9\sqrt{18})(-10\sqrt{125})$

Non-Graphing Calculators Allowed On Quiz

Directions 1-12: Solve the equation. Leave answers as simplified improper fractions if necessary.

1. $180 - x = 3(90 - x)$
2. $5(1 + 4m) = 3(2 + 10m)$
3. $27 = 3g + 2(6 - g)$
4. $15 = 5g - 3(2 - g)$
5. $4(4x + 3) - 12 = 5 - 6(5x + 2)$
6. $\frac{m}{5} = \frac{m-6}{4}$
7. $-\frac{2}{3} = \frac{4x+1}{2x+14}$
8. $\frac{r-8}{-2} = \frac{11-4r}{11}$
9. $\frac{3}{2}x + 6 = 7$
10. $\frac{2}{5}x + \frac{8}{5} = 1$
11. $3\left(\frac{3}{8}y - 3\right) = 4$
12. $\frac{5}{9}\left(\frac{6}{5}w - 2\right) = 9$

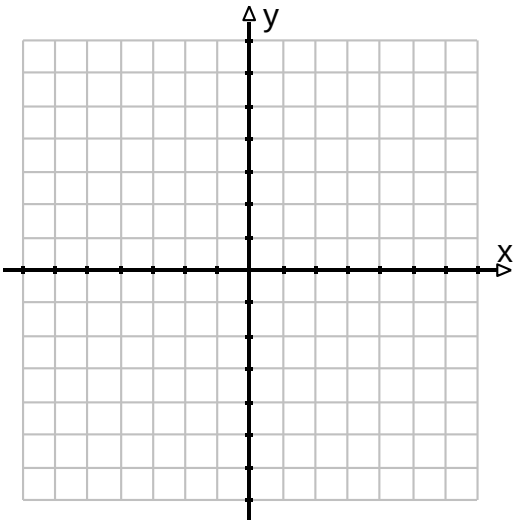
Directions 13-17: Solve for the indicated variable.

13. Solve for x: $6x - 5y = 18$
14. Solve for r: $C = 2\pi r$
15. Solve for y: $4x + 5y = 10$
16. Solve for w: $P = 2l + 2w$
17. Solve for C: $F = \frac{9}{5}C + 32$

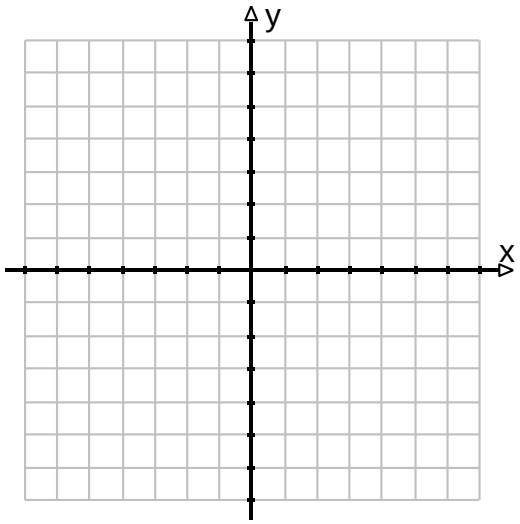
Non-Graphing Calculators Allowed On Quiz

Directions 1-6: Solve by graphing

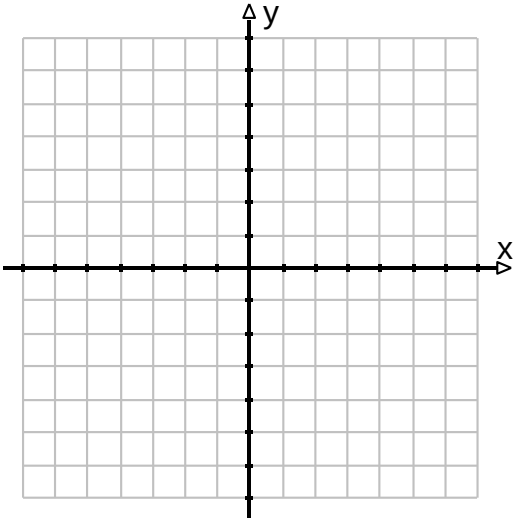
1. $y = 3$
   $y = 3x - 6$



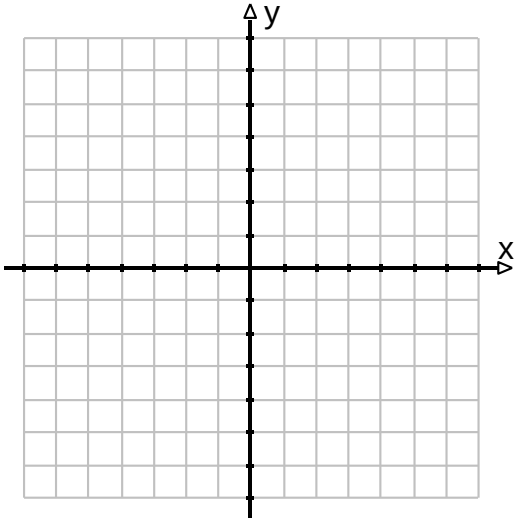
2. $x = -2$
   $y = \frac{1}{2}x + 7$



3. $y = -\frac{2}{5}x + 3$
   $y = -x$

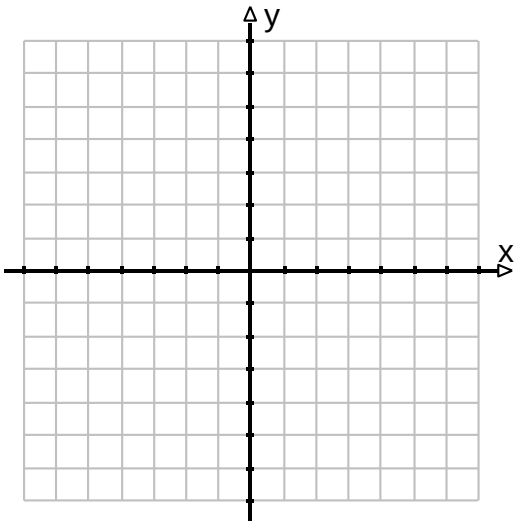


4. $4x + 3y = 18$
   $x - 2y = 10$

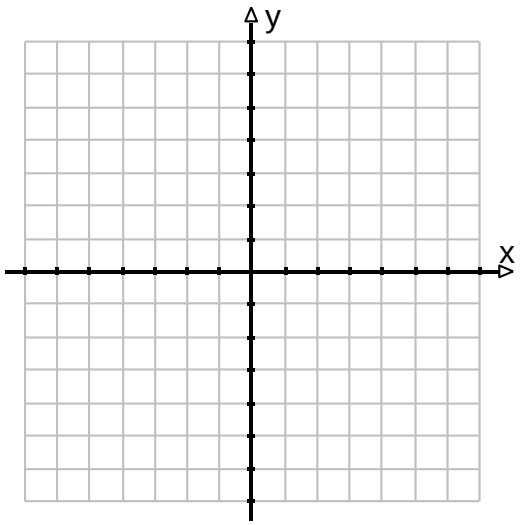


Non-Graphing Calculators Allowed On Quiz

5. $y = 2x + 1$
   $y = x + 3$



6. $3x + 2y = -8$
   $3x - 2y = 4$



Directions 7-12: Solve by linear combinations (multiply and add/sub method).

7. $9x + 2y = 17$
   $3x - 2y = -5$

8. $5x - 7y = 4$
   $5x + 8y = -26$

9. $6x + 5y = 19$
   $2x + 3y = 5$

10. $2x - 6y = -1$
    $3x - 2y = -5$

11. $5x + 2y = 8$
    $2x - 3y = 7$

12. $9x + 2y = 39$
    $6x + 13y = -9$

Directions 13-18: Solve by substitution.

13. $y = 3x + 2$
    $x + 2y = 11$

14. $x = 2y - 6$
    $2x + 3y = 2$

15. $x - y = 3$
    $x + 2y = -6$

16. $3x + y = -7$
    $x - 2y = 0$

17. $y = 2x + 5$
    $3x + 4y = 9$

18. $x = 8y + 12$
    $y = \frac{1}{2}x + 6$

Non-Graphing Calculators Allowed On Quiz