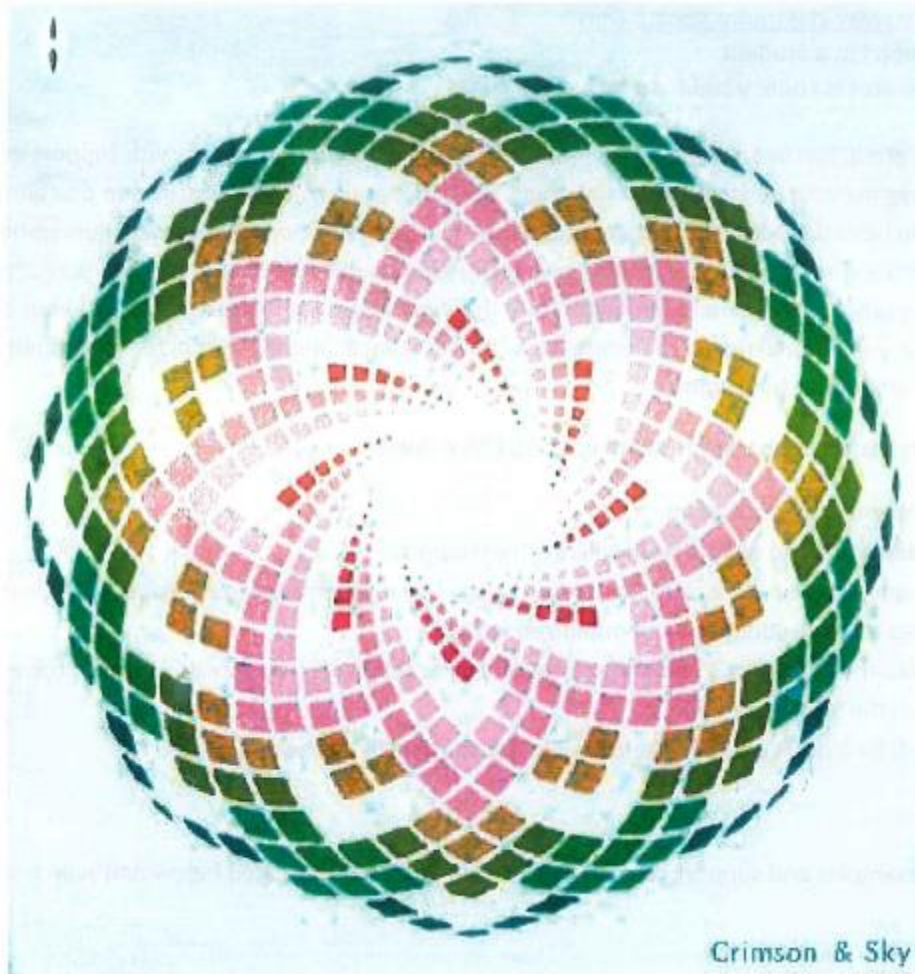




Lawrence High School's Honors Geometry 2019 Required Summer Assignment



Lawrence High School
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To incoming Honors Geometry Students:

Directions: You are expected to complete this Summer Math Packet to be the best prepared for your scheduled math class in September. This packet is due the first week of school. Complete ALL problems. Show all work for every problem. There is a Google Classroom set up named “Honors Geometry Summer Assignment” for you to post questions or answer questions of your fellow classmates.

Google Classroom Group Code:

- Go to www.classroom.google.com
- Click on *I'm a Student*
- Enter access code to access the class.
- CODE **2nzt0dm**

This Google group has been established in order to provide you, the students, with support as a group. If you are struggling with concepts/material, there is a blog option to post questions to one another. In addition, you have the educational resources listed below for additional assistance. Remember the math course from the current school year is the prerequisite course for the course you have enrolled into for the Fall. Your personal notebook and handouts from this year's class is a resource that is at your disposal. You also have the educational resources listed below for assistance, and the instructor may monitor the Google Classroom throughout the summer.

Scoring/Grading: The Honors Geometry Packet is worth a total of 40 points

- Each problem is worth 1 point
- Any problem with no work shown will receive 0 points.
- Do not squeeze your work onto the packet pages. Use a separate sheet of paper with your name on each page to show your neat and organized work.
- Your teacher will enter a 40 point Summer Math Packet Grade into Genesis to record earned grades on the Summer Packet, which is part of your first marking period grade.
- There will be a short quiz after selected Packet material is reviewed in class.

Resources: For additional examples and support you can reference any of the sites listed below and search the skill/concept.

- www.algebra1.com
- KhanAcademy.com
- You Tube.com or Teacher Tube.com
- MathIsPower4u.com
- IXL.com

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Part 1: Ratios and Proportions

Solve the proportion.

1. $\frac{17}{15} = \frac{y}{6}$

2. $\frac{3}{2x+3} = \frac{2}{10x+4}$

3. $\frac{m-3}{7} = \frac{m}{m+8}$

4. $\frac{3n}{2-n} = \frac{n}{n=4}$

Part 2: Algebraic Expressions and Equations

Simplify the radical expression completely.

5. $\sqrt{168}$

6. $\frac{1}{2}\sqrt{128}$

7. $\frac{\sqrt{8}}{\sqrt{3}}$

8. $\sqrt{27} * \sqrt{32}$

9. $\frac{3\sqrt{192}}{4}$

10. $\frac{16\sqrt{3}}{\sqrt{2}}$



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Solve the following equations by taking square roots.

11. $3x^2 - 4 = 8$

12. $3x^2 - 24 = 0$

Factor the following expressions.

13. $x^2 + 2x - 63$

14. $-2x^2 - 44x - 80$

15. $2x^2 + 11x + 5$

Solve the following equations by factoring.

16. $x^2 + 3x - 18 = 0$

17. $3x^2 + 10x = 8$

18. $4x^2 = 4x + 3$

Solve the following equations using the quadratic formula. Give your answer in BOTH radical and decimal form.

19. $0 = -2x^2 - 7x - 1$

20. $-6x^2 + 4x - \frac{1}{3} = 0$



Solve the following system of linear equations.

21.
$$\begin{cases} x + y = 12 \\ 2x - 2y = 10 \end{cases}$$

22.
$$\begin{cases} -10x + 9y = 13 \\ 6x - 2y = -18 \end{cases}$$

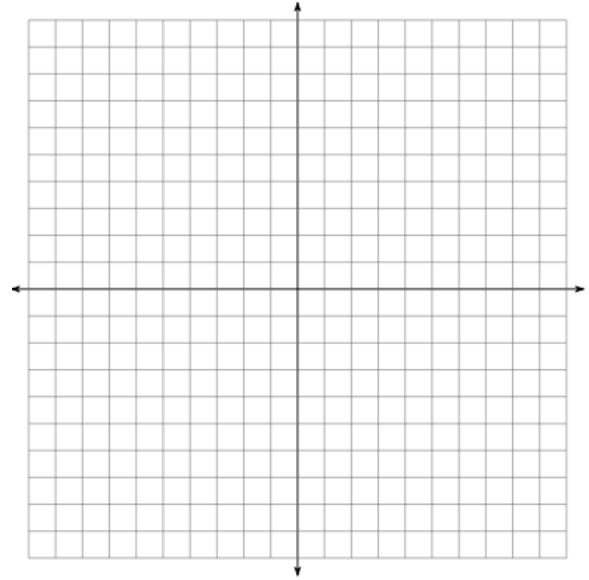
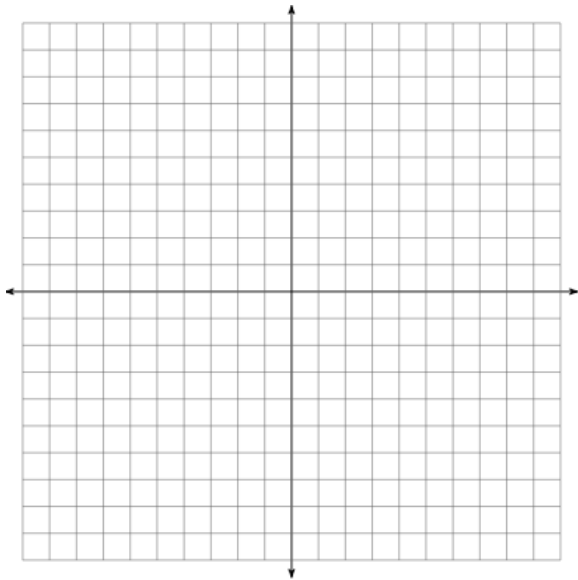
23.
$$\begin{cases} x = -4y + 2 \\ 3x + 2y = 11 \end{cases}$$

Part 3 Graphing

Graph the linear equation.

24. $5x - 2y = 10$

25. $2y - x = 0$



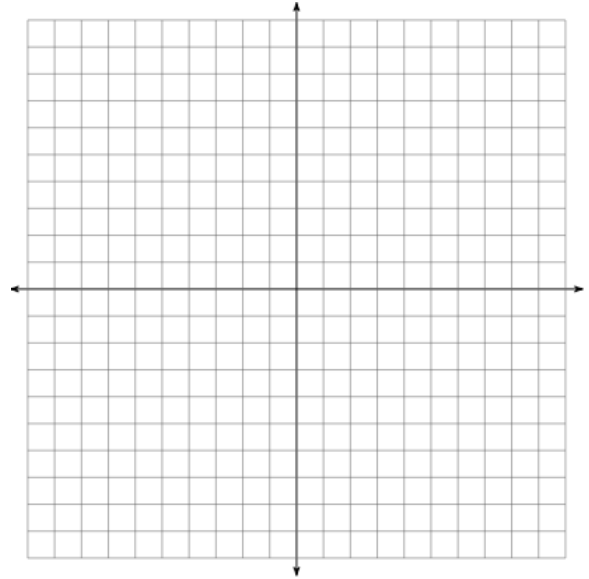
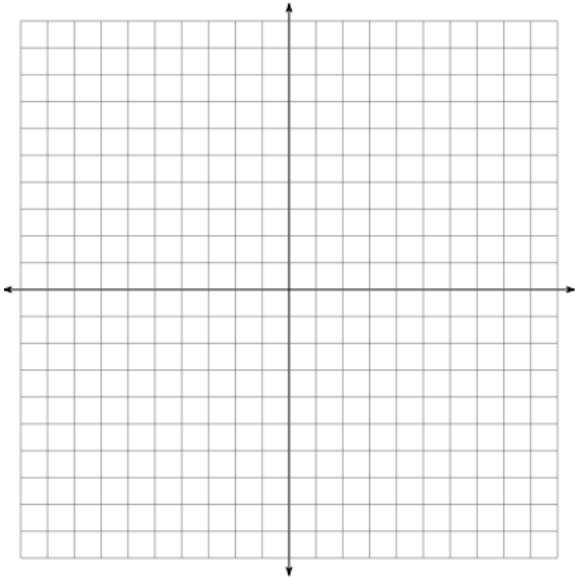


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26. $y = -\frac{4}{5}x - 1$

27. $9y - 6x = 18$



Write the equation of a line using the given information. The final form should be in slope-intercept form. You should start with point-slope form if you are not given a y-intercept.

28. With a slope of 3 and a y-intercept of 4.

29. Passing through the point $(2, -5)$ with a slope of $\frac{1}{2}$

30. Passing through the points $(2,3)$ and $(4,9)$

31. Passing through the point $(-1,8)$ with an undefined slope

32. Passing through the point $(2,5)$ with a slope of zero



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Determine if the lines are parallel. Explain your reasoning.

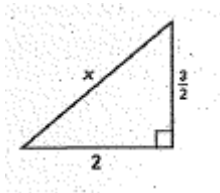
33. $y = -\frac{1}{2}x + 1$ and $2y = x$

34. $y = 2x + 8$ and $y = -2x + 28$

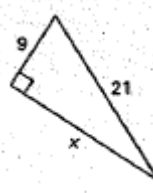
Part 4 Basic Geometry

Find the missing side length of the right triangle. If the length is not an integer, write your answer as a simplified radical AND a decimal to the nearest hundredth.

35.

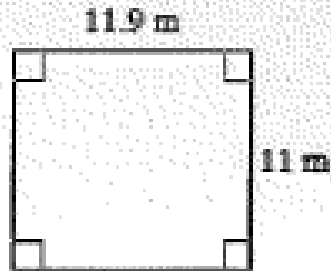


36.

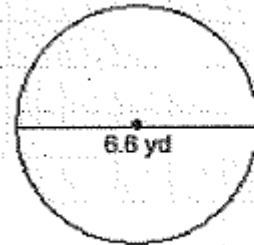


Find the area AND perimeter of the figure below. Show the formula, substitute and solve.

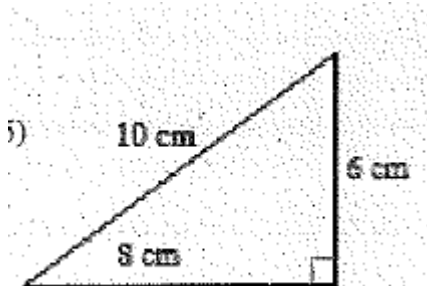
37. Area: _____
Perimeter: _____



38. Area: _____
Circumference: _____



39. Area: _____
Perimeter: _____



40. Area: _____
Perimeter: _____

