Algebra 1 Summer Packet

Packet Due Date: Sept. 2019

Dear, students and parents,

This summer, we encourage you to continue to practice your mathematics at home. Being actively involved in mathematical activities enhances learning.

In preparation for the 2018-2019 school year, students are provided with a summer review packet. This packet focuses on some of the prerequisite concepts and skills necessary for student success in Algebra 1 Honors. The packet may be graded at the teacher's discretion, and may receive extra credit.

While completing the review packet, we recommend that students:

- Complete each problem, and show all steps used to arrive at the final answer.

- Show all work neatly in the actual packet, if it is printed.
   (Additional lined paper may be added if necessary.)

- If packet is not printed, then make sure to number each page and problem as it appears on the packet. All work must be neatly presented.

- Box your final answers.

- Label answers when necessary.

- Use a calculator IF necessary.

- Do not rush! Use time wisely.

- If you are stuck on particular problems, check out of the math websites posted below. Parents may also be able to help. If you are still having difficulty, circle the problem number and be prepared to ask questions in class in Sept.

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<u>HELPFUL APP:</u>

"Virtual Nerd Mobile"

Requirements: iOS 6.0 or later; compatible with iPhone, iPad, and iPod Touch

Features: Virtual Nerd's on-screen instructors provide clear and approachable explanations; students can mark "favorite" videos so that they can instantly return to them in the future.
Price: Free

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<u>HELPFUL WEBSITES:</u>

http://www.khanacademy.org/

http://www.aplusmath.com http://math.com

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Have a fun and productive summer.

Regards,
MCVTS - PA (Math Dept.)

ALGEBRA 1 PREREQUISITE PACKET

Name _____   Date _____ Pd _____

Order of Operations

Use order of operations to determine each answer. Complete these problems WITHOUT using a calculator.

1. $4 \cdot 16 + 8 - 0 \div 5 =$ _____

2. $8(3+4) - 2 \cdot 8 \div (5-3) =$ _____

3. $\left(8^2 + (13-4)^2\right) \div 5 =$ _____

Insert parentheses to make the following equation true.

4. $8 + 12 \div 4 \cdot 5 = 1$

Distributive Property and Combining Like Terms

Simplify each expression by using the distributive property and/or combining like terms.

5. $4n + 7n =$ _____

6. $-8a + 7b + 2a + 4b - 5b =$ _____

7. $2(x+3) =$ _____

8. $-(4-x) =$ _____

9. $\dfrac{2}{3}(3x+9) =$ _____

10. $5(2x-4) + (x-7) =$ _____

ALGEBRA 1 PREREQUISITE PACKET

One Step Equations

Use inverse operations to solve each equation.

11. $x + 22 = 10$	12. $15 - x = 45$	13. $3x = 48$
14. $\dfrac{x}{3} = 27$	15. $\dfrac{2}{7}x = 4$	16. $\dfrac{x}{24} = \dfrac{5}{12}$

Two Step Equations

Solve each equation.

17. $2x + 7 = 15$	18. $\dfrac{x}{5} - 4 = 2$	19. $-8 - 5x = 2$

ALGEBRA 1 PREREQUISITE PACKET

Multi Step Equations

Solve each equation.

20. $9x + 8 = 3x - 10$

21. $\dfrac{5x + 9}{2} = 12$

Evaluating Expressions

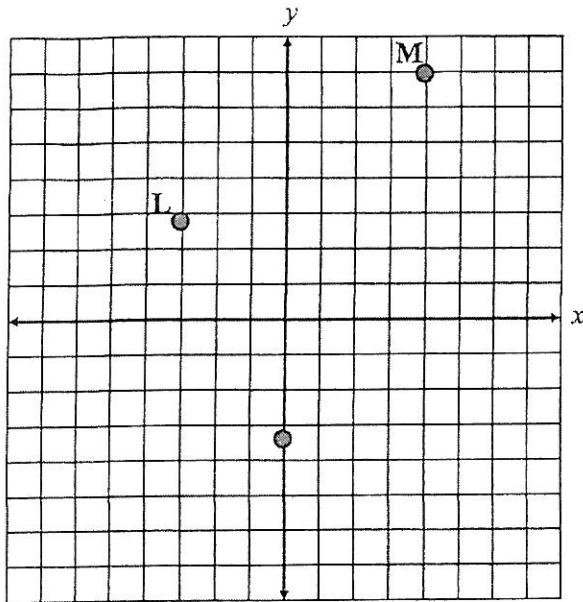Evaluate each expression given that $x = 2$, $y = 3$ and $z = 4$.

22. $x + 6 =$

23. $y^2 =$

24. $5z - 3 =$

ALGEBRA 1 PREREQUISITE PACKET

Graphing on the Coordinate Plane

Plot each of the following points on the grid to the left. Use the letter to label each point.
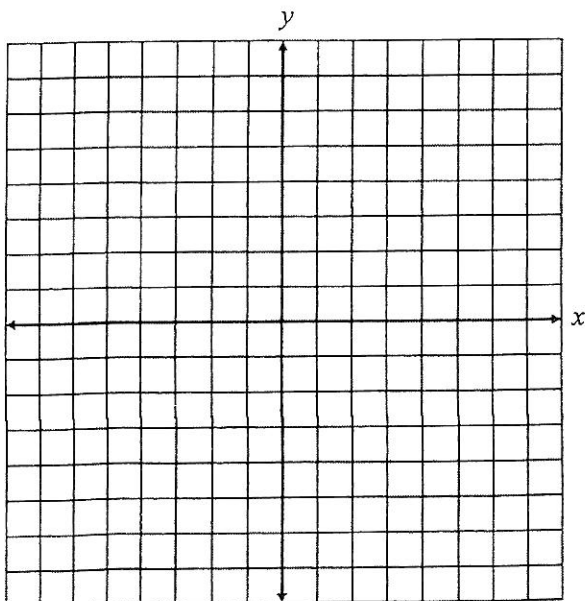
25. A $(3, 0)$

26. B $(-1, 5)$

27. C $(-6, -2)$

Write the coordinates of the each point shown on the graph to the left.
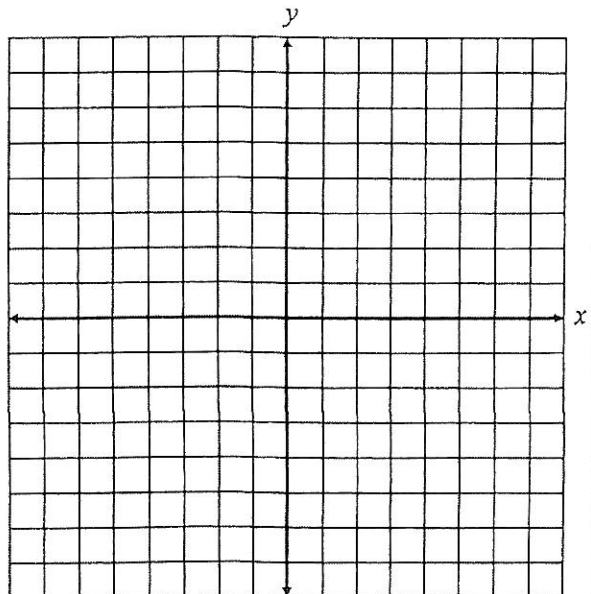
28. L _____

29. M _____

30. N _____

Graphing Equations

Graph each equation.

31. $y = \dfrac{2}{3}x - 1$

32. $y = -4x + 5$

Inequalities

Solve and graph each inequality.

33. $\dfrac{x}{3} > 4$

34. $-2x \geq 6$

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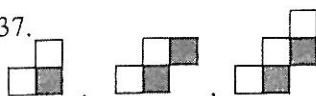## Patterns and Tables of Values

Write the next three terms in each pattern.

35. 5, 12, 19, 26, ...

_____ , _____ , _____

36. $3x + 4$, $3x + 1$, $3x - 2$, ...

_____ , _____ , _____

37.

 , , , _____ , _____ , _____

Complete each table of values.

38.

x	y
0	180
2	174
4	168
6	
8	
10	
12	

39.

x	y
1	10
2	
3	32
4	
5	54
6	
7	76