

CP Algebra 1



Summer packet

- This summer packet must be completed **BEFORE** the first day of school. This is prerequisite material needed to be successful in Algebra 1 and will only be reviewed in class – NOT retaught.
- **You may use a calculator for all problems, but it is HIGHLY recommended that you do most of the work WITHOUT a calculator. You can use the calculator to check your work when you are done. You must also show your work!!!**
- You will be given a **TEST** on this material within the first week of school that will count toward your first marking period grade.
- The material covered within this packet involves mastery of concepts required for Algebra I, such as order of operations, working with fractions, solving simple algebraic equations and inequalities, simplifying expressions, and solving word problems.
- Do not expect to complete this packet in one sitting. It is recommended that you work on 10 to 15 problems at a time. Plan to take your time when working on these problems and carefully read through each question, underline key points and information when working on word problems, and **show all steps** when solving equations or simplifying expressions.
- Use another piece of paper if there is not enough room on the worksheet.
- If you are having trouble with some of these topics you can go to <http://www.khanacademy.org/> and sign up to begin using this on-line learning tool. Each group of problems is described with the concept it is testing so you can search for that topic if you so desire



1-7 Practice

The Distributive Property

Use the Distributive Property to simplify each expression.

1. $7(z - 4)$

2. $3(2 + w)$

3. $(2h - 4)11$

4. $(6y - 3)5$

5. $17(2b + 3)$

6. $12(4 - 8p)$

7. $7(11 - n)$

8. $(1 - 11j)4$

Simplify each expression.

13. $-1(p + 6)$

14. $-(-9 - 4y)$

15. $-(a - 15)$

16. $-(-z - 12)$

Simplify each expression by combining like terms.

23. $9y + 11y$

24. $23b - 19b$

25. $35t - 42t$

26. $-4p + 2p$

27. $-10x^2 - 14x^2$

28. $-5k^2 + 6k^2$

Simplify each expression.

41. $3(x + 4) + 2(5x + 2)$

42. $3(2n - 7) + 7(4 - 2n)$

43. $5(5 + t) - 3(t - 6)$

1-8 Practice

An Introduction to Equations

Tell whether the given number is a solution of each equation.

7. $5x + 10 = -35$; -9

8. $8p - 3 = 13$; -2

1-9 Practice

Patterns, Equations, and Graphs

Tell whether the given ordered pair is a solution of the equation.

14. $y = -6x + 1$; $(-1, -5)$

15. $y = -\frac{1}{2}x + 4$; $(-8, 8)$

2-1 Practice

Solving One-Step Equations

Solve each equation using addition or subtraction. Check your answer.

1. $6 = p - 8$

2. $z + 5 = 4$

3. $m - 4 = 12$

4. $-10 = h - 4$

Solve each equation using multiplication or division. Check your answer.

7. $4t = -32$

8. $-25 = -5x$

9. $-3.2k = 16$

10. $2.8r = 16.8$

11. $\frac{m}{7} = 4$

12. $25 = \frac{z}{-4}$

Solve each equation. Check your answer.

13. $\frac{3}{4}b = 15$

14. $-8 = \frac{2}{5}t$

15. $\frac{9}{10}y = -36$

16. $\frac{1}{2}m = \frac{6}{11}$

2-2

Practice

Solving Two-Step Equations

Solve each equation. Check your answer.

1. $4x + 5 = 13$

2. $-8 + 3h = 1$

3. $2j - 13 = 25$

4. $\frac{n}{5} - 1 = 7$

5. $-5 = 8 + \frac{y}{10}$

6. $7 = -6m + 7$

9. $15 - 3t = -12$

10. $13 + \frac{a}{11} = 7$

Solve each equation. Check your answer.

13. $\frac{f+4}{2} = 5$

14. $\frac{p-6}{3} = -15$

2-3

Practice

Solving Multi-Step Equations

Solve each equation. Check your answer.

1. $20 + g + g = 14$

2. $7 + 4x - 9 = -6$

3. $-12 = -5 - 6n + 11$

4. $t + 10 - 4t = -11$

Solve each equation. Check your answer.

9. $4(-2d - 3) = 12$

10. $5(5t - 2) = -35$

11. $-2(a + 6) = -22$

12. $60 = 6(6 - 2n)$

13. $-14 = -4(9x - 1)$

14. $-(5z + 12) = 18$

2-7 Practice

Solving Proportions

Solve each proportion.

$$1. \frac{3}{4} = \frac{a}{12}$$

$$2. \frac{1}{3} = \frac{m}{21}$$

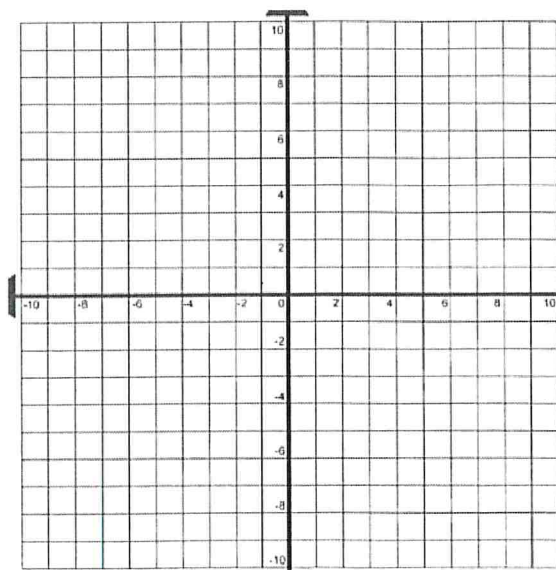
$$3. \frac{x}{5} = \frac{2}{3}$$

$$4. \frac{f}{24} = \frac{3}{8}$$

Plotting Coordinates on the Coordinate Plane

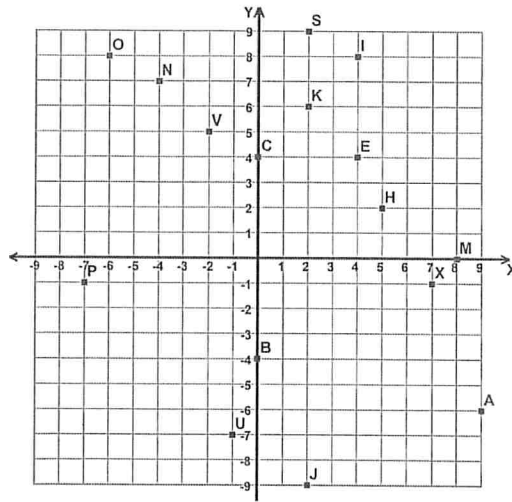
Plot and label the following coordinates on the grid provided.

- 38. A (-2, 5)
- 39. B (4, -3)
- 40. C (-1, -2)
- 41. D (0, 4)
- 42. E (5, 0)



Tell what point is located at each ordered pair.

- 1) $(-7, -1)$ _____ 3) $(+4, +8)$ _____ 5) $(-2, +5)$ _____ 7) $(-1, -7)$ _____
 2) $(+4, +4)$ _____ 4) $(+7, -1)$ _____ 6) $(+0, +4)$ _____ 8) $(+2, +6)$ _____



Absolute Value & Order of Operations

Directions: Evaluate each expression.		
1. $ -13 =$	2. $ 21 =$	3. $ -3 + -5 =$
4. $ 9 + -8 =$	5. $ -12 + 15 =$	6. $ 21 - 17 =$
7. $ -11 - -5 =$	8. $ 4 - -4 =$	9. $ 15 - 23 =$
10. $ 24 - -15 =$	11. $ 28 - -26 =$	12. $ -3 - 19 =$

Directions: Evaluate each expression.

13. $7 + 54 \div 3(2)$

14. $17 - 2^5 \div 4 + 6$

15. $24 - 4^2 \cdot 3 + 15$

16. $\frac{(7 - 2^2) + 17}{-14 + 2 \cdot 5}$

17. $(8 - 5)^3 - |5^2 - 4^3| \div 3$

18. $|-7^2 + 3^2 \cdot 4| + 18 \div 2 \cdot 5$