



CHRISTOPHER COLUMBUS

A Marist Brothers High School 1958



Dear Student,

Welcome to Algebra 1! Algebra 1 is the branch of mathematics which uses letters and symbols to express relationships between quantities in terms of formulas, equations, etc. Algebraic symbolism and operations enter into nearly all branches of science, including the various subdivisions of mathematics. Topics included are fundamental concepts of modern mathematics, positive and negative numbers, irrational numbers, and linear and quadratic equations.

This summer math packet addresses the material that you were exposed to in previous math courses. It serves two purposes:

1. It will allow you to remain mathematically fresh during the summer.
2. It will allow you to enter Algebra 1 prepared, and ready, with a review of previous mathematical concepts. To receive credit, all work must be shown. All work must be done in pencil, neat and organized.

Grading:

- The summer assignment is due on the first day of your mathematics class
- All questions will be reviewed by your teacher the first week of school.
- A test will be given on the material in the summer packet the second week of school.

We hope that you have an enjoyable summer and return ready for Algebra 1!



Accredited by AdvancEd and a member of the National Catholic Educational Association

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Algebra 1 ACC Summer Packet (Short Answer Version)

1. List all integers in the set: $\{16, \sqrt{5}, -15, 0, 5/6, -6/5, 6.7, \sqrt{4}\}$

2. List all whole numbers in the set: $\{20, \sqrt{6}, -5, 0, 1/3, -3, 4.3, \sqrt{9}\}$

3. List all rational numbers in the set: $\{5, \sqrt{6}, -10, 0, 0/8, \sqrt{25}, 0.57\}$

4. List all irrational numbers in the set: $\{7, \sqrt{7}, -2, 0, 0/1, \sqrt{4}, 0.69\}$

5. Tell which set(s) the number π belongs to.

6. Plot the points $\{-4.75, -2, 0, 2.25\}$ on a real number line.

7. Use one of the inequalities ($<$, $>$, $=$) to compare: $-5 ? 0$

8. Use one of the inequalities ($<$, $>$, $=$) to compare: $-9 ? -7$

9. Use one of the inequalities ($<$, $>$, $=$) to compare: $9/3 ? 12/4$

10. Replace $?$ with the correct symbol: $|-9| ? |-13|$

11. Evaluate: $|-2|$

12. Evaluate: $|-1/5|$

13. Find the sum: $15 + (-8)$

14. Find the sum: $-12 + (-4)$

15. Find the sum: $3 + (-3)$

16. Find the sum: $25 + (-20) + 11 + (-3)$

17. Write the positive or negative number: The stock experienced a \$355 loss.

18. Write the positive or negative number: They hiked 356 feet above sea level.

19. Lauren scored 6, 11, 8, and 3 points during the week. Find the total points scored.

20. Dave and Neil started at -58 feet and rose 24 feet. What was their elevation?

21. Determine the additive inverse of -29.

22. Find the difference: $-5 - 12$

23. Find the difference: $-14 - 36$

24. Evaluate: $|-118| - 515$

25. Write the expression using mathematical symbols, then evaluate: -9 minus -5

26. A stock rose 3 points, fell 7 points, and fell 13 more points. Find the total change.

27. Find the product: $2(-11)$

28. Find the product: $-2(-6)$

29. Find the product: $(-2)(-4)(-6)$

30. Divide: $-25 \div -5$

31. Divide: $-63 \div 7$

32. Find the product and write in lowest terms: $10/9 \times 4/5$

33. Find the product and write in lowest terms: $4 \times 161/18$

34. In a class of 60 students, $2/5$ took the final and $1/3$ of those earned an A. How many students earned an A?

35. Find the quotient and write in lowest terms: $28/5 \div 2/5$

36. Find the quotient and write in lowest terms: $-3/10 \div 7$

37. Find the sum or difference and write in lowest terms: $-1/7 + 2/7$

38. Perform the operation: $-3/10 + (-1/5)$

39. Perform the operation: $-6.5 + 20.9$

40. Perform the operation: 0.09×0.3

41. Evaluate the exponential expression: 9^3

42. Evaluate the exponential expression: $(2/3)^2$

43. Evaluate the expression: $21 + 11 \times 27$

44. Evaluate the expression: $9^2 - 4 \times 8$

45. Evaluate the expression: $[52 \div (9 - 6) - 6] \div (3^2 - 3)$

46. Use the Distributive Property to remove the parentheses: $8(y + 9)$

47. Use the Distributive Property to remove the parentheses: $-(-2m + 4n - 8)$

48. Simplify by combining like terms: $2y - y - 6y$

49. Simplify by combining like terms: $5x + 3 + 3x - 9$

50. Simplify by combining like terms: $4x^2 - 2x + 3 + 7x + 5 + 6x^2$
