ALLEN PARK HIGH SCHOOL

Summer Assessment

Algebra 1

Summer Packet

For Students Entering Algebra 1

This summer packet is intended to be completed by the FIRST DAY of school. This packet will be graded and count as the first grade of the marking period. You should be working on the same packet as the class you are taking NEXT YEAR. Feel free to email me if you have any questions regarding your packet by emailing me at: tim.brown@apps.k12.mi.us. We encourage you to check your answers and re-work any problems that were incorrect. **We expect you to spend at least 1 hour each week on your summer math packet**. This packet is not designed for one intense 10 hour session the day before school starts so begin now!

This summer math packet will be worth 50 points and will be your first recorded grade of the marking period**.** Bring your questions and concerns regarding any problems you may have had difficulty with to your class on the first day of school, September 4th. Start off the year with a great start by completing the packet to the best of your ability.

All Summer Packets can be found on the Math Department Website: http://aphsmath.weebly.com

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DIRECTIONS

This section of test is 96 items, which you will work in this booklet. Mark the correct answer as directed by your teacher. You may use a calculator that has been approved by your teacher. Only your test booklet and calculator may be used; no other materials should be on your desk.

Find each.

1. $\frac{3}{4} + \frac{1}{2}$

2. $\frac{5}{6} + \frac{1}{4}$

3. $\frac{3}{8} + \frac{5}{12}$

4. $\frac{6}{7} - \frac{1}{4}$

5. $-2\frac{3}{4} - 3\frac{2}{5}$

6. $1\frac{4}{5} - \left(-4\frac{2}{3}\right)$

7. $-2\frac{1}{2} - \left(-5\frac{5}{6}\right)$

8. $3\frac{2}{5} + \left(-1\frac{1}{3}\right)$

9. $\frac{3}{4} \square \frac{8}{9}$

10. $\frac{12}{15} \square \frac{5}{16}$

11. $-\frac{7}{9} \square \frac{6}{21}$

12. $-\frac{5}{8} \square -\frac{12}{25}$

13. $\frac{7}{8} \div \frac{21}{32}$

14. $-\frac{5}{6} \div \frac{8}{25}$

15. $\frac{9}{10} \div -\frac{35}{24}$

16. $-\frac{12}{8} \div -\frac{27}{18}$

Simplify each.

17. $|-9|$

18. $|-(-13)|$

19. $-|-26|$

20. $-|-(-14)|$

Find the value of each expression when *x* = -5.

21. $|x + 2|$

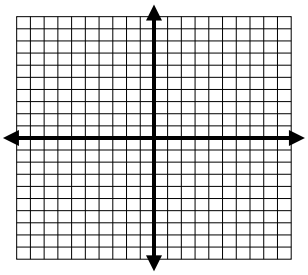
22. $|x - 7|$

23. $3|x + 9|$

24. $-4|x - 11|$

Plot the following points on the coordinate plane provided.

25. A(3, -6) **26.** B(0, -3) **27.** C(-7, -5) **28.** D(5, 9) **29.** E(7, 0) **30.** F(-6, 2)



Determine which of the following points: (6, 8), (2, 1), and (-2, -5) is a solution to the given equation of a line.

31. $y = 3x - 5$ **32.** $y = 4x + 3$ **33.** $y = \frac{2}{3}x + 4$

Find the slope $\left(\frac{y_2 - y_1}{x_2 - x_1}\right)$ **of the following points.**

34. (5, 9),(3, 16) **35.** (8, -2),(4, -14) **36.** (-3, -1),(4, -6) **37.** (-2, 13),(-8, 3)

Simplify

38. $x^2 \cdot x^5$ **39.** $\left(x^3\right)^5$ **40.** $\frac{4x^3}{12x^5}$ **41.** $\left(3x^3y^4\right)^2$

42. $\left(3x^2\right)\left(-4x^4\right)$ **43.** $\left(\left(x^3\right)^2\right)^4$ **44.** $4x^3 + 13x^3$ **45.** $7x^4 - 16x^5$

Replace each ☐ with <, >, or = to make a true sentence.

46. $\frac{4}{5} \square -\frac{1}{7}$ **47.** $\frac{2}{9} \square 0.2$

48. Replace ☐ with <,>, or = to make $-\frac{4}{5} \square -0.\overline{8}$ a true sentence.

49. Replace $\square$ with $<$, $>$, or $=$ to make $-0.65 \square -\frac{13}{20}$ a true sentence.

50. Order the numbers in the set from least to greatest: $\left\{\frac{5}{8}, 0.06, 60\%, 2 \text{ out of } 3\right\}$

Write each fraction as a decimal. Use a bar to show a repeating decimal.

51. $\frac{3}{8}$ **52.** $-\frac{2}{3}$

Write each decimal as a fraction or mixed number in simplest form.

53. 0.24 **54.** 0.135

Express each fraction as a percent.

55. $\frac{11}{25}$ **56.** $\frac{2}{500}$

57. Express 3.25% as a decimal.

Express each decimal as a percent.

58. 0.04 **59.** 4.32

Translate each phrase into an algebraic expression.

60. two more than k **61.** the quotient of p and five **62.** five less than twice t

Evaluate each expression.

63. $16 \div 4 + 20$ **64.** $(18 - 9) \div 3$ **65.** $16 \div 4 + 18 \div 2$

66. $6[5 + (14 - 8) \div 3]$ **67.** $4[2(6 \cdot 4) - 8 \cdot 6]$

68. $4 \div 2 + 5(10 - 6)$

69. $6\left[32 - (2 + 3)^2\right]$

Evaluate each expression if $n = 6$, $m = 8$, and $p = 3$.

70. $m + 3n$

71. $\frac{mn}{3}$

72. $p + 7 - n$

Evaluate each expression if $a = \frac{4}{5}$, $b = -\frac{5}{6}$, and $c = 3\frac{1}{2}$. Write the product in simplest form.

73. ab

74. $-3b$

75. $-\frac{1}{3}ac$

76. Evaluate $7x^3$ if $x = 2$.

77. Evaluate $4r^4 + 3^b$ if $r = -2$ and $b = 3$.

Simplify each expression.

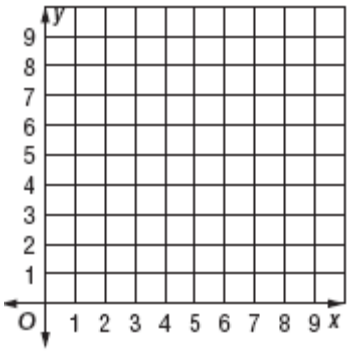
78. $10 + m - 8 - 4m$

79. $15t + 4(2t - 2) + 17$

80. $21 - 8w - 9 + 3(w + 3) - 4w$

Use the function table shown below.

81. Graph the ordered pairs for the function.



Input (x)	Output (y)
2	2
3	4
4	6
5	8

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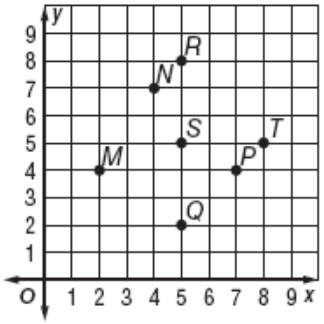
Refer to the coordinate plane shown.



82. Name the point for the ordered pair (5, 8).

83. Write the ordered pair that names the point *N*.

Solve each equation.

84. $4 + x = 26$

85. $h - 12 = 7$

86. $-35 = 5t$

87. $\frac{b}{3} = 11$

88. $6t + 1 = 31$

89. $-3x - 7 = 14$

90. $15 = \frac{w}{5} + 17$

91. $\frac{n}{2} - 9 = 2$

92. $9y + 27 = -72$

93. $-34 = 6m - 4$

94. $16 = \frac{n - 2}{7}$

95. $7 = -11 + 3(b + 5)$

96. $13x + 2 = 4x + 38$

97. $2z - 13 = -8z + 27$

98. $3(3w - 2) = 2(3w + 3)$

99. $\frac{2}{3} + \frac{1}{6}r = \frac{5}{6}r + \frac{1}{3}$

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Translate each sentence into an equation. Then find each number.

100. Thirteen more than 8 times a number is −3.

101. Six less than the quotient of a number and 5 is 1.

102. The product of 6 and the sum of a number and 3 is 60.

Graph each inequality on the number line.

103. $5x + 9 - x > 7x + 24$

104. $3(x - 7) \leq 5(x - 1)$

Algebra 1 Summer Assignment Answer Form. NAME_____ HR_____

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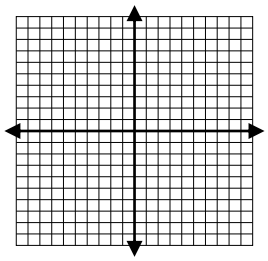
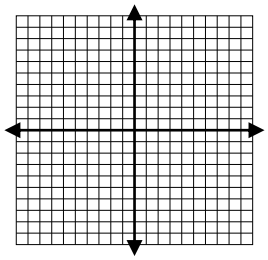
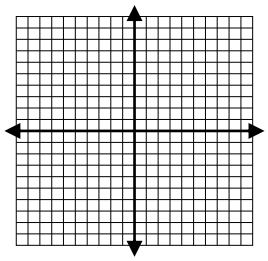
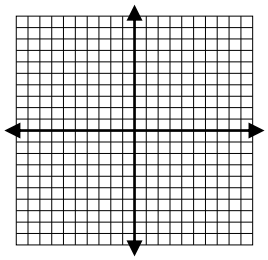
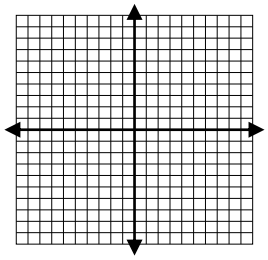
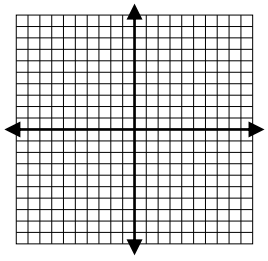
25. 

26. 

27. 

28. 

29. 

30. 

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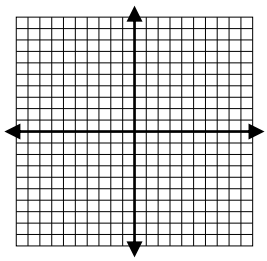
81. 

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