

Joel Barlow High School

Serving the Towns of Easton and Redding, Connecticut
Dedicated to Academic Excellence and Moral Leadership

Advanced Algebra I and Algebra I Readiness Review
For Students Entering Advanced Algebra I or Algebra I
June 1, 2010

Dear Student:

Enclosed is an Algebra Readiness Review Packet prepared by the math teachers at JBHS.

At the beginning of the school year at Barlow, you will be given a readiness test to assess whether you have acquired the skills necessary to be successful in Advanced Algebra 1 and Algebra 1. Your score on this test will count as a unit test in the first quarter. Included in the review packet is material from both the pre-algebra portion of your present course (signed numbers, evaluating expressions, solving simple equations, simple graphing) and content from previous grades (fractions, decimals, percents).

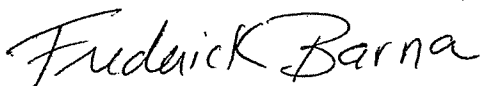
It is important that students be placed in an appropriate math level based on required skills. Teachers will contact the guidance counselors and parents of students who receive very low scores on the test in order to discuss the suitability of course placement for that student.

Although there may be some activities and assessments that are done without calculators, calculators will be used extensively throughout the course. The TI-84+ graphing calculator is the calculator recommended if purchasing a new calculator for JBHS math courses. Students will need a graphing calculator to complete homework assignments. (Please keep your manual when you buy your calculator.)

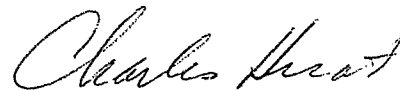
Calculators will not be allowed on the readiness test since it involves only pre-algebra and arithmetic. Notebooks will be required in Advanced Algebra 1 and Algebra 1; they will be checked periodically.

Complete the review packet in preparation for the readiness test. Have a nice summer. See you in the fall.

Sincerely,



Frederick Barna
Instructional Leader: Mathematics



Charles Huot
Instructional Leader: Mathematics

Alg 1 Readiness cvrpg 7-08.doc

At the beginning of the school year at Barlow, you will be given a readiness test to assess whether you have acquired the skills necessary to be successful in Advanced Algebra 1 or Algebra 1. Your score on this test will count as a unit test in the first quarter. Included in the review packet is material from both the pre-algebra portion of your present course (signed numbers, evaluating expressions, solving simple equations, simple graphing) and content from previous grades (fractions, decimals, percents).

Answer all questions **without** using a calculator. Calculators will NOT be allowed on the readiness test since it involves only Prealgebra and arithmetic.

Topic: Fractions, decimals, percents, perfect square numbers, prime numbers and factoring.

1. Write $\frac{1}{4}$ as a decimal.
2. Write 0.125 as a fraction in lowest terms.
3. Write $\frac{15}{4}$ as a mixed number.
4. Write $4\frac{1}{2}$ as an improper fraction.
5. Write 1.6 as a fraction in lowest terms.
6. Write $\frac{3}{8}$ as a decimal.
7. Reduce completely: $\frac{32}{48}$
8. $\frac{7}{8} - \frac{1}{2} =$
9. $\frac{2}{3} + \frac{3}{7} =$
10. $6 - \frac{5}{2} =$
11. $\frac{1}{3} \cdot 6 =$

12. $\frac{4}{7} \cdot \frac{8}{9} =$

13. $5 + \frac{1}{8} =$

14. $1\frac{1}{4} + 3\frac{1}{4} + 2\frac{3}{4} =$

15. 15 is what percent of 20?

16. A student answered 140 questions correctly out of 200.
What percent is this?

17. Find 60% of 50.

18. Find 0.5% of 1000.

19. Which of the following is a perfect square (the square of a whole number)?

- (a) 8 (b) 4 (c) 20 (d) 3

20. Which of the following is a prime number?

- (a) 7 (b) 21 (c) 15 (d) 35

21. Which are NOT factors of 12?

- (a) 10 (b) 6 (c) 4 (d) 5 (e) 3

22. List all the prime numbers less than 30.

23. List all the factors of 24.

24. What is the average of 11, 13, 18 and 22?

(Answer all questions **without** using a calculator. Calculators will NOT be allowed on the readiness test since it involves only Prealgebra and arithmetic.)

Topic: Signed Numbers

25. $3 - 6 + 4 - 12 =$

26. $-4 + -7 =$

27. $5 - (-4) =$

28. $-2 - 9 =$

29. $(-8) - (-1) =$

30. $\frac{-15}{-1} =$

31. $(-2)(-3)(5) =$

32. $\frac{-28}{4} =$

33. $(-3)^4 =$

34. $5\frac{1}{2} - 6\frac{1}{4} =$

35. $2\frac{1}{3} + (-4) =$

Topic: Order of Operations.

(Answer all questions **without** using a calculator. Calculators will NOT be allowed on the readiness test since it involves only Prealgebra and arithmetic.)

36. $2 + 3(4) =$

37. $(5 - 8)(4 - 2) =$

38. $5(6+7) =$

39. $17 - 4 + 9 =$

40. $36 + 4(9) =$

41. $3 - 5^2 =$

42. $4(3^2 - 10) =$

43. $3(2)^3 =$

44. $5 - 4 + 2 =$

45. $5 + \frac{3(2+4)}{5 - 2(4-2)} =$

Topic: Formulas.

46. Find the perimeter of a rectangle with a length of 10 feet and width of 6 feet.

47. Find the area of the rectangle in problem number 46.

48. Find the perimeter and area of a square with a side of 7 feet.

49. If $D = R \cdot T$, find D when $R=45$ and $T = 2\frac{1}{3}$.

Topic: Evaluating Expressions

50. Evaluate $3X^2$ when $X = 4$.

51. Evaluate $3X^2 + 2X - 5$ when $X = -2$.

52. Evaluate $-a + 3b$ when $a = -8$ and $b = 2$.

53. Evaluate $X^2 + Y^2$ when $X = 3$ and $Y = 4$.

Topic: Solving Equations

Solve for X:

54. $X + 6 = 9$

55. $5X = 2$

56. $\frac{2}{3}X = 12$.

57. $X - 8 = 12$

58. $8 = -4 + 2X$

59. $3X - 7 = 10$

Topic: Plotting Points:

Name the coordinates of each of the following points.

60. A (,)

61. B (,)

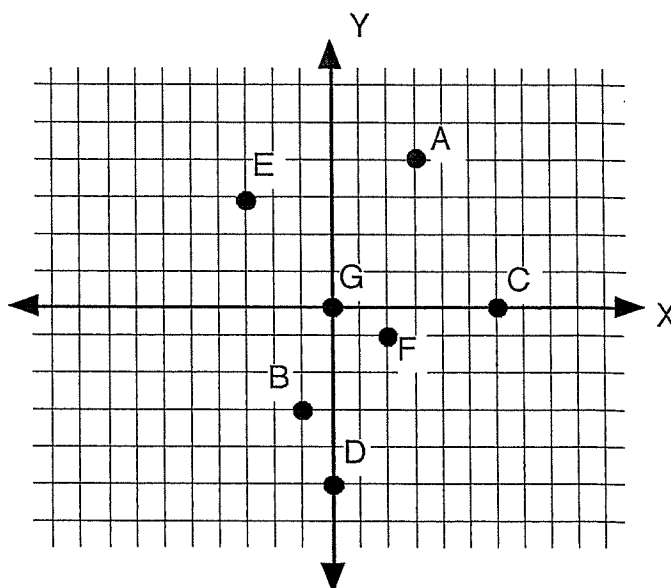
62. C (,)

63. D (,)

64. E (,)

65. F (,)

66. G (,)



Answers to Readiness Review

1. 0.25
2. $\frac{1}{8}$
3. $3\frac{3}{4}$
4. $\frac{9}{2}$
5. $\frac{8}{5}$ or $1\frac{3}{5}$
6. 0.375
7. $\frac{2}{3}$
8. $\frac{3}{8}$
9. $\frac{23}{21}$ or $1\frac{2}{21}$
10. $\frac{7}{2}$ or $3\frac{1}{2}$
11. 2
12. $\frac{32}{63}$
13. $\frac{41}{8}$
14. $7\frac{1}{4}$ or $\frac{29}{4}$
15. 75%
16. 70%
17. 30
18. 5
19. 4
20. 7
21. 10,5
22. 2,3,5,7,11,13,
17,19,23,29
23. 1,2,3,4,6,8,12,24
24. 16
25. -11
26. -11
27. 9
28. -11
29. -7
30. 15
31. 30
32. -7
33. 81
34. $-\frac{3}{4}$
35. $-\frac{5}{3}$ or $-1\frac{2}{3}$
36. 14
37. -6
38. 65
39. 22
40. 72
41. -22
42. -4
43. 24
44. 3
45. 23
46. 32 feet
47. 60 square feet
48. Perimeter 28 feet, Area 49 square feet
49. 105
50. 48
51. 3
52. 14
53. 25
54. $X = 3$
55. $X = \frac{2}{5}$ or 0.4
56. $X = 18$
57. $X = 20$
58. $X = 6$
59. $X = \frac{17}{3}$ or $5\frac{2}{3}$
60. A (3,4)
61. B (-1,-3)
62. C (6,0) 63. D (0,-5) 64. E (-3,3)
65. F (2,-1) 66. G (0, 0)

