

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?

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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.

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

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 (,)

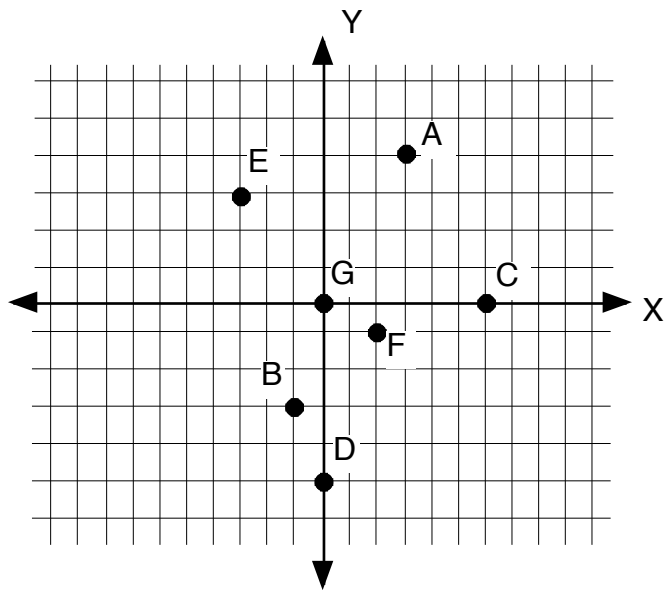
62. C (,)

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)