

Attached is an assignment containing items necessary for you to have mastered to do well in Bridge to Algebra II.

Please complete the assignment for the class you will begin in September 2019.

Practicing mathematics skills is especially important over the long summer break, so this summer assignment is meant to be completed over the entire summer, not all at once.

This assignment must be completed and handed in by the second day of school. The packet will be graded for completion and assigned an individual practice grade. To earn the full points for completion, you must show your work. **No late submissions of the summer assignment will be accepted;** please be prepared to hand it in on time.

Your teacher will review the assignment and may follow up with a formative assessment.

You may wish to utilize the following online resources:

- www.khanacademy.com
- www.ixl.com
- www.purplemath.com
- www.math.com

Enjoy your summer!

Name: _____

Bridge to Algebra II Summer Assignment - 2019

Directions: Answer all questions entirely. You should not use a calculator on any portion of this assignment. You may wish to reference suggested websites for any areas you are struggling with in this packet. **All work and answers should be recorded and organized on separate paper.**

Part I: Vocabulary

Complete each statement with a word from the word bank.

| | | | | |
|-----------------|-------------------|-------------|--------------|----------|
| Equation | Solution | Simplify | Solve | Variable |
| Coefficient | Exponent | Expression | Term | Constant |
| Rational Number | Irrational Number | Real Number | Ordered Pair | Integer |

- _____ A mathematical sentence (does not contain an equals sign)
- _____ Value that makes an equation true
- _____ The n in an expression of the form x^n
- _____ The set of integers, rational, and irrational numbers
- _____ A number that can be written as a fraction
- _____ A product of numbers and variables
- _____ To replace an expression with its simplest name or form
- _____ Numerical factor of a term
- _____ A number
- _____ An (x,y) coordinate
- _____ A whole positive or negative number
- _____ A symbol used to represent a number
- _____ Mathematical sentence with an equals sign
- _____ A number that can be expressed as a fraction
- _____ Find a value that makes an equation true

Part II: Real Numbers

Simplify. All fractions should be written as **improper fractions**.

- $-3 + 2$
- $4 - 6$
- $3 - (-2)$
- $-8 - (-4)$
- $-20 - 7$
- $\frac{1}{2} + \frac{3}{2}$
- $\frac{2}{3} \cdot \frac{4}{5}$
- $-\frac{1}{4} \cdot 2$
- $\frac{5}{6} + \frac{1}{3}$
- $(0.10)(350)$
- $1.25 + 3.5$
- $(0.05)(200)$
- $0.25 - 0.5$
- $-10 + 2.75$

Part III: Simplifying Numerical Expressions

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Simplify each expression.

15. $(3 + 2) - 3^2$

17. $4 - 3 + 2^2$

19. $6 + 3 - 2 + 8$

16. $4 + 8 \div 2 - 7$

18. $-2^2 + 4 \div (1 + 1)$

20. $(5 - 7)^2 \div 2$

Part IV: Simplifying Variable Expressions

Simplify each expression.

21. $3(x - 4)$

25. $3x + 4y + 5x - 6y$

29. $x^2 + 2x - x$

22. $2x + 5 - x$

26. $-3(4x - 5)$

30. $(3x + 2) - 7x$

23. $-2(2x + 1)$

27. $6x - 7(x + 4)$

31. $\frac{3}{4}x - \frac{1}{4}x$

24. $3x + 3(2x + 5)$

28. $\frac{1}{2}(2x + 4)$

32. $-2(2x - 3) + 4(x + 2)$

Part V: Solving One- and Two-Step Linear Equations

Solve each equation.

33. $x + 2 = 5$

37. $5x - 3 = 15$

41. $4 + \frac{x}{3} = -9$

34. $2x = -16$

38. $-20 = 5x$

42. $-4x - 2 = 14$

35. $-3x = 9$

39. $3 - x = 12$

43. $3x - 5 = -14$

36. $\frac{x}{2} = 6$

40. $\frac{x-2}{3} = 4$

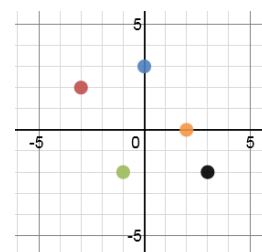
44. $20 - 4x = 38$

Part VI: Graphing Ordered Pairs

45. Plot and label each of the following ordered pairs (on your answer sheet):

- a) A (-3,2)
- b) B (4, 3)
- c) C (-5, 4)
- d) D(-1,-1)
- e) E (0,2)
- f) F (-3,0)

46. What is the ordered pair for each point on the graph below?



Part VII: Ordering Numbers

List each set of numbers in order from *least to greatest*.

47. $\frac{3}{4}, \frac{1}{2}, \frac{5}{6}$

52. $\frac{2}{3}, \frac{1}{2}, 0.6$

54. $-\frac{1}{2}, -\frac{1}{4}, -\frac{2}{3}$

48. $\frac{3}{2}, 1, 0.5$

51. $\frac{4}{5}, \frac{5}{4}, 0.85$

55. $\frac{5}{3}, \frac{3}{2}, \frac{5}{4}$

49. $\frac{5}{6}, \frac{5}{7}, \frac{3}{4}$

52. $0.25, \frac{1}{5}, 0.23$

56. $-\frac{3}{4}, -\frac{2}{3}, 0.3$

50. $0.75, \frac{2}{3}, \frac{2}{6}$

53. $-\frac{1}{5}, -\frac{2}{3}, 0$

57. $0.6, \frac{2}{3}, 0.7$

Part VIII: Finding Percentages

Find each percent, part, or whole.

58. What is 20% of 55?

62. What is 30% of 210?

59. 30 is 50% of what number

63. What percent of 35 is 7?

60. 20 is 10% of what number?

64. What percent of 65 is 13?

61. 8 is 25% of what number?

65. What is 15% of 36?

Part IX: Solving Proportions

66. $\frac{x}{3} = \frac{6}{9}$

69. $\frac{6}{x} = \frac{2}{3}$

67. $\frac{1}{2} = \frac{3}{x}$

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

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

71. $\frac{21}{5} = \frac{7}{x}$

Part X: Word Problems

72. Jake made cupcakes for his birthday. He made 13 chocolate and 9 vanilla. What percent of the cupcakes were chocolate?

73. A recipe for sugar cookies calls for $2\frac{1}{2}$ cups of sugar for 36 cookies. How much sugar would be needed for 48 cookies?

74. Total Fitness charges \$35 a month, plus \$6 for each yoga class taken. Write an equation for the total monthly cost, C, if you take y yoga classes in a given month.

75. Matt mixed $\frac{2}{3}$ cup of strawberries, $1\frac{1}{2}$ cups of pineapples, and $2\frac{1}{3}$ cups of grapes to make a fruit salad. How many 1-cup servings of salad did Matt make?

76. Find the slope of the line between each set of ordered pairs. Then, determine which pairs of lines are parallel, perpendicular, or neither. (Finding Slope Given Two Points) (Slopes of Parallel and Perpendicular Lines)

A. (3, 4) and (1, 6)

B. (-6, 7) and (-3, 6)

77: Find the slope and y-intercept of the graph of each linear function. Then, graph the line. (Graphing Linear Functions)

A. $y = \frac{1}{2}x + 10$

B. $y = -4x - 3$

76.