

**Freedom High School  
Honors Math Summer Assignment**

**THIS WILL NOT BE COLLECTED!  
YOU WILL TAKE A TEST ON THIS THE  
FIRST TWO WEEKS OF THE SEMESTER!**

Your summer assignment is based upon the assumption that you have truly mastered the skills from your prior mathematics courses. Your teacher next year will be building upon these skills in your upcoming math course and will not reteach these skills from the beginning. If you are unsure how to proceed with a given topic, ask an older sibling or parent, seek help from friends, go online for help, or find tutoring in any fashion you can.

**This assignment should be completed by the first day of your honors math class, whether that be in August or January. This packet will not be collected or graded; however, you will be tested on the material within the first two weeks of the semester.** The intent of this packet is to solely insure that you have truly mastered all of the prerequisite skills that your next course will require you to have. There is not any new material in this packet. All of the topics are ones that have been taught in previous courses.

Once again, your teacher will start the semester with a test the first two weeks on all of the topics found in this packet. In theory, this should be a very good grade for you to start the year since you have seen all of the material before and you have the entire summer to prepare.

Good luck and enjoy your summer.

Sincerely,

Freedom High School Math Department

**Useful websites:**

<http://youtube.com>

<http://teachertube.com>

<http://mathforum.org/dr/math>

<https://www.pearsonsuccessnet.com/snpapp/login/login.jsp>

Login: basdschools

Password: Liberty1

<http://www.khanacademy.org/#browse>

### **Drop / Add Policy:**

The following guidelines exist for all other schedule changes requested after August 1st:

- 1) A schedule change request form must be completed by the student and parent. Forms are available in the Counseling Office or the teacher.
- 2) Schedule changes will be considered for valid educational reasons only. Schedule changes will not be made to accommodate requests for lateral moves within the same subject area or teacher preference.
- 3) The counselor and assigned teacher will review schedule change requests.
- 4) Quarter courses (half semester courses) will not be dropped after the first 5 days of class.
- 5) Full semester courses will not be dropped after the first 15 days of class.
- 6) All students must maintain a full schedule for the entire year.
- 7) Level changes will not be considered unless the student has a 75% or lower in the course.

Withdrawals from a course will not become part of the student record if the course is dropped within the first 15 days of a semester class and within the first 5 days of a quarter course (half semester course). A “W” (Withdrew) will be recorded after those days but prior to the end of the first quarter. Either a “WP” (Withdraw Passing) or “WF” (Withdraw Failing) will be recorded if the course is dropped after the first marking period, indicating the student’s progress at the time of withdrawal.

A course change must be based upon academic considerations, and be facilitated by a conference/plan developed by the student, parent, teacher and counselor/grade level administrator to support student success. This plan will require tutoring, completion of all required work to date, and a sincere demonstration of effort and ability by the student prior to dropping a course or level of course for all classes in English, Social Studies, Math, Science and Foreign Language.

## Honors Algebra 2 Summer Assignment

**Directions:** If you struggle with any topic below, just go to YouTube and search the topic. There are plenty of videos there to assist you. For some topics, you will be allowed to use a calculator. For others, you will not. On the test on this material, which will be given the first two weeks of school, you will only be allowed to use a calculator for some of the test. For the topics below that say to do without a calculator, assume you will not be allowed to use a calculator for those parts on the test as well.

### Topic: Order of Operations

**For 1-5, simplify each expression without a calculator.**

- 1)  $6 + 4 \times 5$
- 2)  $3[8 - 3 \times 2 + 4(5 - 2)]$
- 3)  $3(4 - 3^2)$
- 4)  $[7 + 3 \times 2 + 8] / 7$
- 5)  $53 - [3(8 + 2) + 5(9 - 5)]$

### Topic: Evaluating Algebraic Expressions

**For 6-9, evaluate each expression without a calculator.**

- 6)  $10a - 2(b + c)$ , for  $a = 3$ ,  $b = 2$ , and  $c = 4$
- 7)  $(2 + d) - e(5 - f)$ , for  $d = 5$ ,  $e = 3$ , and  $f = 7$
- 8)  $4x + 5y - 3z$ , for  $x = 3$ ,  $y = 4$ , and  $z = 2$
- 9)  $3a - 2b + b(6 - 2)$ , for  $a = 4$  and  $b = 2$

### Topic: Mean, Median, and Mode

**For 10-13, find the mean, median, and mode. You may use a calculator.**

- 10) 14.2, 14.7, 14.3, 14.6
- 11) 8, 7, 3, 5, 9, 2, 4, 7
- 12) 1.1, 1.8, 2.6, 1.8, 1.9, 2.6
- 13) 37, 42, 51, 28, 36

### Topic: The Distributive Property

**For 14-17, simplify each expression using the distributive property.**

- 14)  $2(5x + 4)$
- 15)  $\frac{1}{4}(12x - 8)$
- 16)  $5(4 + 2x)$
- 17)  $-(14x - 3)$

**Topic: Plotting Points in the Coordinate Plane**

**For 18-22, draw a coordinate plane and plot the points. Label each point using the appropriate letter.**

18) S(2, -4)   19) T(0, 0)   20) U(-2, -1)   21) V(0, 4)   22) W(-2, 0)

**Topic: Solving Equations**

**For 23-30, solve each equation. Be sure to check your answer.**

23)  $9x + 4 = 6x - 11$

24)  $4b - 13 = 7b - 28$

25)  $3k + 5 = 2(k + 1)$

26)  $4y + 5 = -7$

27)  $3x - 4 = 8$

28)  $\frac{x}{4} + 3 = 10$

29)  $3(x - 5) + 4(x + 2) = 14$

30)  $2(y - 2) = y + 1$

**Topic: Combining Like Terms**

**For 31-35, simplify each expression.**

31)  $3a + 5 - x + 7x - 2a$

32)  $7b - b - x + 5 - 2x - 7b$

33)  $2r + 3s - 5r$

34)  $\frac{1}{2}a - 5 - \frac{1}{2}a$

35)  $\frac{7}{8}x + 5 - \frac{3}{8}x - 4$

**Topic: Solving and Graphing Inequalities**

**For 36-39, solve each inequality and graph the solution.**

36)  $3x + 2 < 2x + 5$

37)  $5x + 4 < 14$

38)  $4x - 3 < 3x - 1$

39)  $2x + 5 > -1$

**Topic: Solving Proportions**  
**For 40-44, solve each proportion.**

$$40) \frac{x}{5} = \frac{2}{10}$$

$$41) \frac{2}{x} = \frac{8}{36}$$

$$42) \frac{2}{6} = \frac{4}{x}$$

$$43) \frac{30}{125} = \frac{n}{100}$$

$$44) \frac{3}{18} = \frac{t}{6}$$

**Topic: Adding and Subtracting Polynomials**  
**For 45-50, add or subtract the polynomials.**

$$45) (4x - 5y + 3) + (2x + 7y - 7)$$

$$46) (3a^2 + 5a - 6) - (2a^2 - 3a - 9)$$

$$47) (6z^3 - 5z^2 + 1) + (8z^3 + 7z^2 - 4)$$

$$48) (4x^2 + 2) - (-2x^2 + 5) + (x^2 + 4)$$

$$49) (2x^2 - 3x + 4) + (3x^2 + 2x - 3)$$

$$50) (4x^2 - x + 6) - (3x^2 - 4)$$

**Topic: Multiplying Binomials (F.O.I.L)**  
**For 51-61, multiply each.**

$$51) (x - 8)(x - 4)$$

$$52) (x - 3)(x + 9)$$

$$53) (x + 2)(x - 7)$$

$$54) (7x + 4)(2x - 4)$$

$$55) (5x + 1)(x + 1)$$

$$56) (x - 7)^2$$

$$57) (2x + 3)^2$$

$$58) (5x - 4)^2$$

$$59) (x - 3)(x + 3)$$

$$60) (4x + 3)(4x - 3)$$

$$61) (7x + 1)(7x - 1)$$

**Topic: Adding and Subtracting Positive and Negative Integers**  
**For 62-71, add or subtract without a calculator.**

62)  $-10 - 47$

63)  $-29 - 29$

64)  $13 + (-29)$

65)  $38 + 22$

66)  $-32 - 44$

67)  $-12 + (-11)$

68)  $2 + 15 + 4$

69)  $16 + (-13) + 5$

70)  $2 - (-9) - 8$

71)  $10 + 3 - (-8)$

**Topic: Multiplying and Dividing Positive and Negative Integers**  
**For 72-83, multiply or divide without a calculator.**

72)  $153 \div 17$

73)  $12 \div (-3)$

74)  $48 \div 6$

75)  $-120 \div (-20)$

76)  $-11 \times 9$

77)  $-7 \times -12$

78)  $-8 \times -11$

79)  $-6 \times 4$

80)  $8 \times (-6) \times (-3)$

81)  $-3 \times 6 \times (-6)$

82)  $(3)(3)(-1)(3)$

83)  $(-3)(3)(-3)(-3)$