

Summer Packet 2019-2020

The purpose of this summer work is to help prepare you for your upcoming math class. The work will tap into your prior knowledge and review past content, concepts, and skills. Our expectation is that you arrive on the first day of school able to demonstrate mastery of the material in this packet. In order to achieve this, please allow yourself plenty of time to work on the problems, use your resources (such as the review materials provided, Khan Academy, or the math faculty here at the school during the summer to specifically help with the summer work (July 15th — Aug 15th on Tues and Wed from 8:30 to 10:30 by appointment)), and work each problem to completion.

You will use Khan Academy to complete the summer work for Algebra II Part 2. This work will be due on **Thursday, September 5th and Friday, September 6th**, and will be 3% of your first quarter grade. 10% will be deducted for each day it is late. Summer work will not be accepted after Sept. 12th. Each math problem in the packet will be graded as follows:

Summer Work Assignments	Grading	Evidence	Perseverance
the written packet (found on page 3 to 22)	One points will be awarded for the problem being attempted and another will be awarded for the correct answer.	Students will show all necessary work for credit.	Students will show their work when solving a problem. If they are struggling, they will seek out extra help.

Your teacher might choose to give a non-graded assessment on the first week of school in order to target remediation strategies and requirements.

A note from your Algebra 2 Part 2 teacher:

This packet will help you to sharpen your skills and be ready for the first day of the 2018-2019 school year. These problems shouldn't take too long. HAVE A GREAT SUMMER!!!!

Summer Homework**Evaluate each expression.**

1) $(-8) + 4)(5 + 5)$

2) $(-6) - (-6) + 10 - (-8)$

3) $(-1)^3 + 8 \cdot (-1)$

4) $(-5) - (-4) - \frac{9}{-3}$

5) $(6 - 9 + 1) \cdot 4$

6) $3 \times (-1)^2 - \frac{4}{-2}$

7) $(-4) + 7 + (-5) - (-10) - (-3)$

8) $\frac{2 + 2 - (-1)}{(-8) + 7}$

9) $(-3) \times \frac{4 - 2}{4 - 5}$

10) $\frac{18}{9 + 9 - (9 - (-6))}$

Find each product.

11) $(2p - 2)(5p + 5)$

12) $(5n - 5)(5n + 1)$

13) $(5a + 5)(4a - 1)$

14) $(4n + 3)(n - 4)$

15) $(v + 4)(5v - 4)$

16) $(-n - 2)(-7n + 5)$

17) $(-6x - 4)(5x + 5)$

18) $(7x + 8)(-8x + 2)$

19) $(3x + 4)(-3x - 3)$

20) $(-4v - 5)(-2v - 2)$

Factor each completely.

21) $6n^3 - 24n^2 + 18n$

22) $n^2 - 5n - 6$

23) $x^3 - 100x$

24) $n^2 - 7n$

25) $b^2 - 3b$

26) $r^2 - 15r + 54$

27) $n^3 - 8n^2$

28) $2m^2 - 36m + 160$

29) $6k^2 + 24k - 126$

30) $n^2 - 5n + 4$

Solve each equation by factoring.

31) $b^2 + 6b = 0$

32) $r^2 + 3r - 40 = 0$

33) $a^2 - 4a - 5 = 0$

34) $x^2 + 10x + 25 = 0$

35) $a^2 - 5a = 0$

36) $x^2 + 2x - 3 = 0$

37) $a^2 + a - 56 = 0$

38) $x^2 + 5x - 24 = 0$

39) $a^2 - a = 0$

40) $m^2 - 5m - 6 = 0$

Simplify.

$$41) \frac{-9 + \sqrt{3}}{\sqrt{15}}$$

$$42) \frac{4 + \sqrt{7}}{9\sqrt{33}}$$

$$43) \frac{5\sqrt{2}}{10\sqrt{6}}$$

$$44) \frac{10 - 4\sqrt{3}}{5\sqrt{3}}$$

$$45) \frac{\sqrt{10} + 9\sqrt{5}}{9\sqrt{12}}$$

$$46) \frac{5 + 3\sqrt{6}}{\sqrt{5} - 9}$$

$$47) \frac{9}{-1 + \sqrt{3}}$$

$$48) \frac{7}{4 - 3\sqrt{3}}$$

$$49) \frac{-5 - 10\sqrt{2}}{6 + 3\sqrt{3}}$$

$$50) \frac{10 + \sqrt{5}}{\sqrt{3} - 3\sqrt{10}}$$