

Course Number (when applicable)
MA200 MA220 MA250
Course Title
Algebra II Algebra II with Analysis Honors Algebra II with PreCalculus
Name of Assignment (title of book(s), Author, Edition, and ISBN (when applicable))
Summer Packet
Expectations/Instructions for Student When Completing Assignment
<p>PLEASE NOTE: The Algebra II with Analysis and Honors Algebra II with PreCalculus course begins with Chapter 2 Section 4. Chapter 1 and 2.1-2.3 are a prerequisite for the course.</p> <p>Use of calculator is allowed, but write the exact answer where applicable; fully simplify all answers. Include ALL work on a separate sheet in numerical order. If you get stuck on a problem, use previous textbooks, notes, online tutorials, or each other as a resource.</p>
One Essential Question for Assignment
How can you be an effective and resourceful problem solver?
One Enduring Understanding for Assignment
A problem solver understands what has been done, knows why the process was appropriate, and can support it with reasons and evidence, given that the ability to solve problems is the heart of mathematics.
Parent Role and Expectations
Parents should serve as a supportive resource in order to ensure your daughter's completion of the summer packet by the start of school.
Estimated Time Requirement
Varied depending on student pace and knowledge

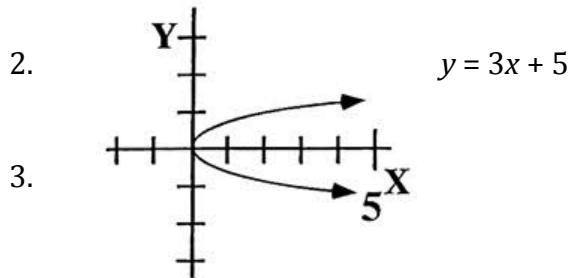
Summer Assignment for Students Entering:
Algebra II, Algebra II w/Analysis, Algebra II w/ Precalculus

For Algebra II w/Analysis and Algebra II w/PreCalculus ONLY:

In your Algebra II textbook please complete and turn in on a separate sheet of paper: page 53/ 1-23 and page 127/1-26

Does the following represent a function?

1. $f = \{(3, -1), (2, 5), (4, -6), (3, 4), (5, -8)\}$



4. Find the slope of a line passing through the given points: $(3, 4)$ and $(2, -5)$.

Write the equation of a line that:

5. Goes through the point $(5, 3)$ and has a slope of $-2/3$

6. Has a slope of -8 and y - intercept -6

7. Undefined slope and passes through the point $(-1, -3)$

Graph the following lines:

8. $y = -4$

9. $-3x + 2y = 6$

10. $y = x$

11. Determine if the two lines $3x + 2y = 6$ and $y = (2/3)x + 4$ are parallel, perpendicular, or neither.

Find the x and y intercepts of the following equation:

12. $2x + 3y = 12$

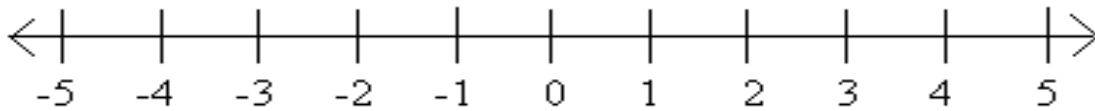
13. $y = 1/2x + 8$

14. Michael charges a flat rate of \$25 plus \$20 per hour to service furnace and air conditioners. Write a rule to describe his total fee as a functions of the number of hours worked.

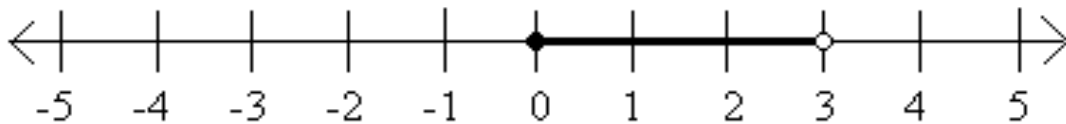
Solve the following equations:

15. $|x - 3| = 5$

16. $4x > 2x - 6$ Graph your solution



17. Write the inequality that the following graph represents:



18. Graph: $5x - 6y < -30$

19. Solve the system of equations by substitution:

$$\begin{aligned}6x + 6y &= 5 \\ y &= -x\end{aligned}$$

20. Solve the system of equations by elimination:

$$\begin{aligned}3x - 2y &= 0 \\ x + y &= 5\end{aligned}$$

21. Solve the system of equations graphically:

$$\begin{aligned}y &\leq 2x - 2 \\ x &> -3\end{aligned}$$

Multiply:

22. $-3x(5x + 3y)$

23. $(2x - 8)(x - 3)$

24. $(x - 4)^2$

Factor:

25. $x^2 - 3x - 4$

26. $x^2 - 16$

27. $x^2 + 18x + 81$

28. $9x^2 + 9x - 10$

29. $6x^2 + 13x + 6$

30. Can a square have an area of $4x^2 - 4x - 1$? Why?

Solve by factoring:

31. $(x + 8)(x + 3) = 0$

32. $2x^2 + 3x - 9 = 0$

Solve by using Quadratic Formula. (Leave answers in simplified radical form. NO DECIMALS):

33. $7x^2 - 4 = 0$

34. $2x^2 + 8x + 3 = 0$

Solve by taking square roots:

35. $2x^2 - 32 = 0$

Complete the square:

36. $x^2 - 12x + ?$

Solve by completing the square:

37. $x^2 + 2x - 7 = 0$

Graph the following quadratic function. Label vertex, axis of symmetry, and two points.

38. $y = x^2 + 3$

39. $f(x) = -x^2 + 2x - 4$

Given $h(x) = (x^2 - 2)$ and $g(x) = |x - 4|$

40. Find $h(-2)$

41. Find $g(-3)$

42. Find $h(1) + g(4)$

43. Write the equation of a linear function such that $f(-3) = 2$ and $f(4) = 8$

Simplify. Leave in radical form. (NO DECIMALS)

44. $-3\sqrt{7} - \sqrt{81} + 7\sqrt{63}$

45. $(\sqrt{30})(\sqrt{20})$

46. $\frac{\sqrt{30}}{\sqrt{20}}$

Given the following set of numbers:

$$\{32, \sqrt{5}, 2.79, 0, -6.8888, \frac{7}{4}, -9\}$$

47. Place them in ascending numerical order.

48. Name the irrational numbers.

49. Kendra owns a restaurant. She decides to charge \$1.50 for 3 eggs and one piece of toast and \$0.90 for one egg and one piece of toast. How much is she charging for each egg and each piece of toast?

50. Identify two questions/exercises from this packet of which you feel you have a thorough understanding. Identify two questions/exercises from this packet on which you feel you would like further instruction.

Got it!

1.

2.

Help:

1.

2.