

Clearview Regional High School District 2017 Summer Assignment Coversheet

Course:	Honors Algebra II
Teacher(s):	Tara Powell, Laurie Doughten, Karen Hitchner
Due Date:	<ul style="list-style-type: none"> Friday, September 8th, 2017
Purpose of Assignment:	<ul style="list-style-type: none"> To help students review Algebra I pre-requisites skill that must be mastered when entering H. Algebra II. Many students have had a year off from Algebra I while taking Geometry, and therefore will need to review some of this material over the summer
Description:	<ul style="list-style-type: none"> Algebra I Packet in preparation for Honors Algebra II
New Jersey Student Learning Standards (Content) covered:	<p>A-CED.A.2, 3 Rewrite expressions and produce equivalent forms. A-REI.C.6 Solve systems of linear equations. A-REI.D.11, 12 Represent and solve equations and inequalities graphically. F-IF.A.1, 2 Understand the concept of a function F-IF.B.4, 6 Interpret functions F-IF.C.7, 8, 9 Analyze functions F-BF.A.1 Build a function that models a relationship between two quantities F-BF.B.3 Build new functions from existing functions F-LE-B.5 Interpret expressions for functions in terms of the model.</p>
Grading/Use of Assignment: Category/Weight for Q1:	<ul style="list-style-type: none"> Assignment will be checked for <u>COMPLETION</u> on Friday September 8th, 2017 as a <u>HOMEWORK GRADE</u> All work must be shown for each problem to receive credit as the answers will be posted in August There will be a <u>QUIZ</u> on this material during the second week of school.
Specific Expectations:	<ul style="list-style-type: none"> The packet should be completed prior to the start of school. Answers can be checked once they are posted in August. Students should practice with skills that they find they are deficient in prior to the start of school and mark any questions that they have for the teacher. Time will be allotted in class for questions about problems in the packet, but the skills in the packet will not be completely retaught in class.
Where to Locate Assignment:	<ul style="list-style-type: none"> Clearview District Website
Additional Help/ Resource(s):	<ul style="list-style-type: none"> ONLINE RESOURCES: Khan Academy & Kuta Software

Algebra Review – prep for Honors Algebra II

SOLVING EQUATIONS

SOLVE each of the following equations. Show all work.

1. $-\frac{3d}{4} + 5 = 7$

1. _____

2. $\frac{1}{2}(4x + 12) = 6(x - 1)$

2. _____

3. $\frac{5n+1}{8} = \frac{3n-5}{4}$

3. _____

Solve for x.

4. $\frac{x-3}{6} + 3 = a$

4. _____

FUNCTIONS, EQUATIONS & GRAPHS

State the DOMAIN and RANGE of each relation. Then determine if it is a function.

5. $\{(-30, 40), (0, 40), (30, 20), (20, 0)\}$

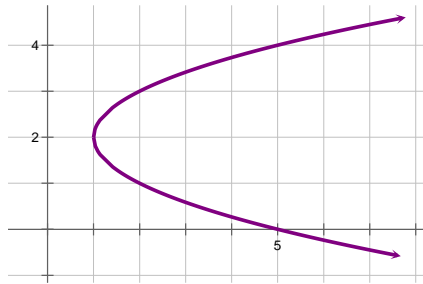
Domain: _____

Range: _____

Function? _____

Algebra Review – prep for Honors Algebra II

6. Does the graph below represent a FUNCTION? Explain.



Domain: _____

Range: _____

Function? _____

Given the FUNCTIONS $f(x) = 2x - 3$ and $g(x) = 2 - x + 2x^2$, evaluate the following:

7. $f(-5)$

7. _____

8. $g(\frac{1}{2})$

8. _____

9. If $f(x) = -3x + 7$ and $g(x) = -7x + 3$, what is the value of $f(-3) - g(3)$?

9. _____

10. Find the EQUATION OF THE LINE containing the points $(7, -1)$ and $(-2, 4)$.

10: _____

Algebra Review – prep for Honors Algebra II

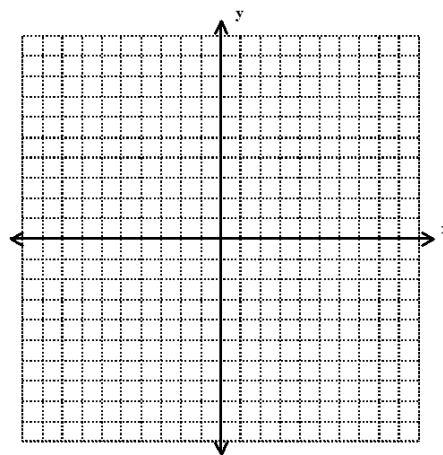
11. Find the X and Y INTERCEPTS of $6x + 2y = 12$.

11. _____

12. Write the equation of the line in STANDARD FORM: $y = -\frac{3}{5}x + 3$

12. _____

13. Graph the INEQUALITY: $2x + 3y \geq -6$



LINEAR SYSTEMS:

Solve each System of Equations using SUBSTITUTION or ELIMINATION.

14.
$$\begin{cases} 4p + 2q = 8 \\ q = 2p + 1 \end{cases}$$

14. _____

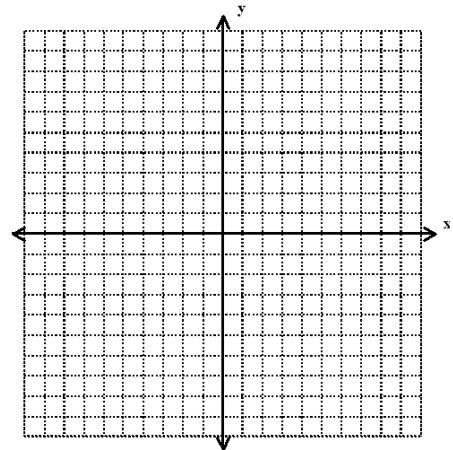
15.
$$\begin{cases} 2a + 3b = 12 \\ 5a - b = 13 \end{cases}$$

15. _____

Algebra Review – prep for Honors Algebra II

Graph the solution of the SYSTEM OF INEQUALITIES.

$$16. \begin{cases} x + 2y \leq 10 \\ x + y \leq 3 \end{cases}$$



EXPONENTS & EXPONENTIAL FUNCTIONS:

Simplify each expression. Use only POSITIVE EXPONENTS.

$$17. (2x^3y^7)^{-2}$$

$$18. \frac{12x^5y^3}{4x^{-1}}$$

17. _____

18. _____

$$19. \left(\frac{r^{-7}b^{-8}}{t^{-4}w} \right)^0$$

19. _____

Simplify each RADICAL EXPRESSION. Answers should be in simplest radical form.

$$20. \sqrt{18}$$

$$21. \sqrt[3]{216}$$

$$22. \sqrt{\frac{3}{15}}$$

20. _____

21. _____

22. _____

$$23. 4\sqrt{b^5}$$

$$24. \text{Express in Radical Form: } m^{\frac{1}{3}}$$

23. _____

24. _____

Algebra Review – prep for Honors Algebra II

POLYNOMIALS & FACTORING:

Simplify.

25. $(5x^2 - 3x + 7x) + (9x^2 + 2x^2 + 7x)$

25. _____

26. $(3x - 5)(2x + 7)$

27. $(8r - 5s)^2$

26. _____

27. _____

FACTOR each polynomial completely.

28. $x^2 - 10x + 24$

29. $14y^2 + 7y - 21$

28. _____

29. _____

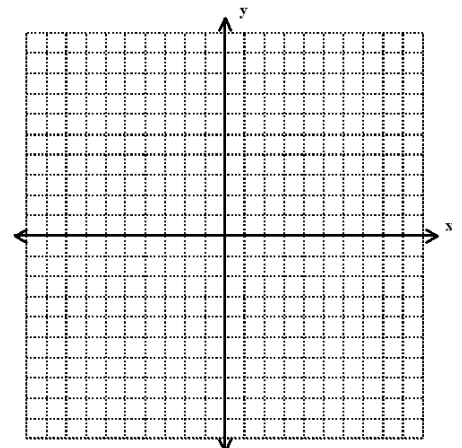
30. $4x^3 + 12x - 28$

30. _____

QUADRATIC FUNCTIONS:

Graph the quadratic function:

31. $y = -2x^2 + 4$

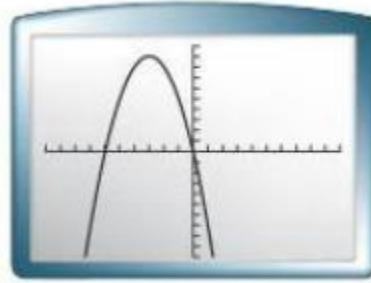


Algebra Review – prep for Honors Algebra II

Find the equation for the **AXIS OF SYMMETRY** and the coordinates of the **VERTEX** for each graph.

32. $y = 2x^2 + 4x - 1$

33.



AOS: _____

Vertex: _____

AOS: _____ Vertex: _____

Solve the quadratic equation using **SQUARE ROOTS**:

34. $5x^2 - 20 = 0$

34. _____

SOLVE each Quadratic Equation by **FACTORING**.

35. _____

35. $x^2 - 16 = 0$

36. $2k^2 + 22k + 60 = 0$

36. _____

Solve the quadratic equation using the **QUADRATIC FORMULA**:

37. $2x^2 - 3x - 5 = 0$

37. _____

Algebra Review – prep for Honors Algebra II

RADICAL EXPRESSIONS & EQUATIONS:

Simplify each expression.

38. $5\sqrt{8} + 2\sqrt{72}$

39. $-\sqrt{12}(4 - 2\sqrt{3})$

38. _____

39. _____

Solve the RADICAL EQUATION:

40. $\sqrt{2b} + 4 = 8$

40. _____