

Clearview Regional High School District 2018 Summer Assignment Coversheet

Course:	Honors Algebra II
Teacher(s):	Tara Powell, Laurie Doughten
Due Date:	<ul style="list-style-type: none"> • STRONGLY RECOMMENDED, but not mandatory
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"> • There will be a QUIZ 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

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

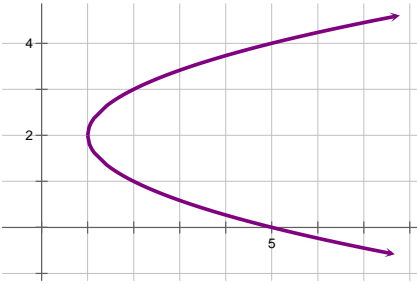
Domain: _____

Range: _____

Function? _____

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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: _____

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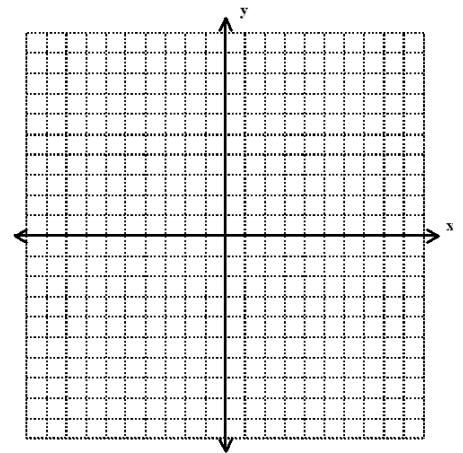
11. Find the X and Y INTERCEPTS of $6x + 2y = 12$.

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. _____

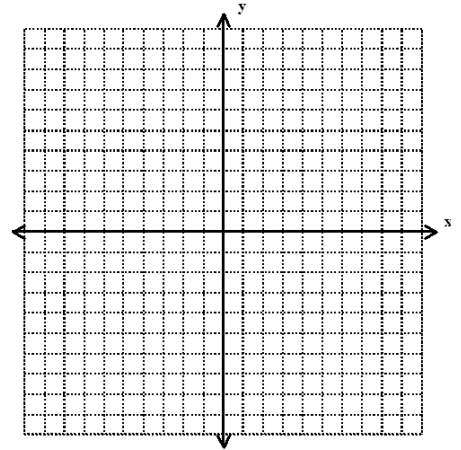
15.
$$\begin{cases} 2a + 3b = 12 \\ 5a - b = 13 \end{cases}$$

15. _____

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

23. _____

24. _____

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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. _____

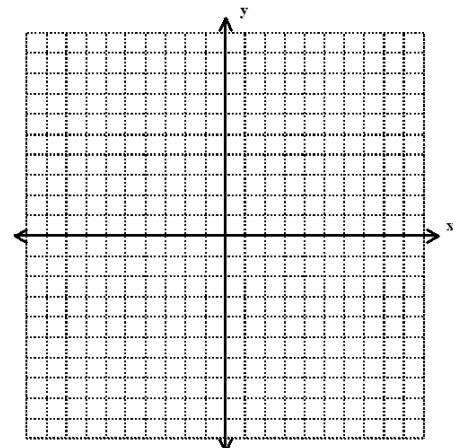
30. $4x^3 + 12x - 28$

30. _____

QUADRATIC FUNCTIONS:

Graph the quadratic function:

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

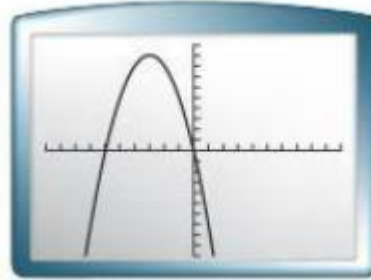


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Find the equation for the **AXIS OF SYMMETRY** and the coordinates of the **VERTEX** for each graph.

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. _____

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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. _____