

Clearview Regional High School District

2021 Summer Assignment Coversheet

Course:	Honors Algebra 1
Teacher(s):	Miller, Wescott, Paoletti
Due Date:	OPTIONAL (answers will be posted in late August)
Purpose of Assignment:	To assess the students understanding of concepts necessary for Honors Algebra I.
Description of Assignment:	Students will solve problems involving fractions, integers, expressions, equations, inequalities and graphs. All problems are to be solved without the use of a calculator.
New Jersey Student Learning Standards covered:	The Number System MA.7.7.NS.A.1, MA.7.7.NS.A.2, MA.7.7.NS.A.3
	Expressions and Equations MA.7.7.EE.A.1, MA.7.7.EE.A.2, MA.7.7.EE.A.3, MA.7.7.EE.A.4
	Ratios and Proportional Relationships MA.7.7.RP.A.2, MA.7.7.RP.A.3
Use of Assignment:	This packet contains skills that students should have mastered prior to entering Honors Algebra I. Students can use this packet to gauge their understanding and readiness for the course.
Specific Expectations:	Students are to try every problem. Students should also come to class with questions on any problems they did not understand.
Where to Locate Assignment:	Clearview Website
Teacher Contact Information:	<div> <div> Mrs. Jill Miller jmiller@clearviewregional.edu </div> <div> Mrs. Karisa Wescott kwescott@clearviewregional.edu </div> </div> <div> Mrs. Anne Paoletti apaoletti@clearviewregional.edu </div>
Additional Help/Resource(s):	Learnzillion.com, mathisfun.com, khanacademy.org, analyzemath.com, freemathhelp.com, analyzemath.com

Operations with Rational Numbers

Add, Subtract, Multiply or Divide.

1] $-12 + 4 =$	2] $-15 + (-7) =$
3] $-23 - 56 =$	4] $17 - 43 =$
5] $-25 - (-12) =$	6] $42 + (-13) =$
7] $-8(-9) =$	8] $\frac{-54}{-6} =$
9] $-18 - (-24) =$	10] $-32 - 81 =$
11] $-13 \cdot 11 =$	12] $-18.4 - 12.9 =$
13] $-33.58 \div 2.3 =$	14] $-8.3(-13.7) =$
15] $-\frac{4}{5} + \frac{2}{3} =$	16] $\frac{1}{2} - \frac{8}{9} =$
17] $-\frac{7}{11} - 3\frac{1}{3} =$	18] $1\frac{4}{7} - (-2\frac{5}{6}) =$
19] $\frac{25}{36} \cdot (-\frac{54}{55}) =$	20] $-1\frac{3}{4} \div (-1\frac{5}{16}) =$

Order of Operations

Evaluate each expression.

1] $(-4) \cdot 6 + (-9 - 5) =$	2] $9 \cdot 5 - 64 \div 16 + (-42) =$
3] $-7 + 4 + (3^3 - 12 \div 6) =$	4] $6 + (-18) - 7 \cdot 4 + 5^2 =$
5] $-72 \div 9 + (3^2 - 60) =$	6] $\frac{18 - 24 \div 4}{4^2 - (-4)}$
7] $5(-5 - 7) \div 15 + (-12) =$	8] $5(14 - 42 \div 3) + 12 \cdot \frac{1}{4}$
9] $-162 + [6(17 - 14)^2] \div 3 =$	10] $\frac{4\{10 - (27 \div 9)\}}{(3 - 7)^2}$

Variables and Expressions

Write an algebraic expression for each word phrase.

1] 4 less than x	2] 5 times the sum of a number b and 4
3] the sum of 15 and m	4] 20 increased by a number h
5] one third of a number a	6] the difference of 9 and a number n
7] the quotient of 12 and b	8] 6 increased by the product of 3 and p

Substitution

Use substitution to determine whether the solution is correct.

1] $2x - 3 = 15$; $x = 9$	2] $3b + 4 = -10$; $b = -4$
3] $4 - 2m = 8$; $m = -2$	4] $5p + 12 = 24$; $p = 2$
5] $5a - 12 = -27$; $a = -3$	6] $20 - 4n = 32$; $n = -3$

Evaluating Expressions

Evaluate each expression when $a = 6$, $b = -3$, $c = -2$, and $d = \frac{1}{3}$.

1] $a + b - c$	2] $3a - 2b$
3] $4c - 3b - 9$	4] $-18d - 4a$
5] $\frac{6a-12}{2c}$	6] $ab - 7c - 30d$
7] $-4a - 2b - 3c$	8] $2bc - ad$

Solving Proportions

Solve each proportion below. Show all work.

$$1] \frac{x}{21} = \frac{3}{63}$$

$$2] \frac{5}{x+1} = \frac{3}{12}$$

$$3] \frac{x}{5} = \frac{x+1}{10}$$

$$4] \frac{5}{2x} = \frac{3}{2x-1}$$

$$5] \frac{4}{5x} = \frac{2}{7}$$

$$6] \frac{3}{2x+5} = \frac{2}{x-4}$$

$$7] \frac{-5}{x+3} = \frac{2}{x-4}$$

$$8] \frac{x-3}{x} = \frac{1}{4}$$

Distributing and Combining Like Terms

Simplify each expression.

1] $12a + 3b + 7a + 8b$	2] $-8n - 4m + 6n - 3m$
3] $14x + 12y - 8 - 8x - 16y$	4] $-6c - 15d + 12 - 2c + 15d - 18$
5] $3(5m - 8)$	6] $4(2a - 3) + 7a$
7] $5(3m + 4n) + 6(m + 2n)$	8] $3(4a - 2b) + 4(5a - b)$
9] $6(2x - 3y) - 3(4x - 2y)$	10] $-2(3c - 4d) - 4(6c + 2d) + 6d$
11] $3(5m + 2) - 2(4m - 3n) + 6$	12] $2(4x - 3y - 8) - 3(5x - 2y + 7)$

Solving Equations

Solve each equation.

1] $4n - 8 = 40$	2] $\frac{3}{4}a - 12 = -3$
3] $-\frac{b}{4} + 7 = -10$	4] $-\frac{2}{5}m - 14 = -24$
5] $-10c + 14 = 9$	6] $-13a - 29 = -12a + 2$
7] $7z + 6 = 12z - 19$	8] $8m - 20 = -3m + 35$
9] $12n + 15 = 23 + 8n$	10] $5(d - 6) = 8d + 18$
11] $-18x - 14 = -24x + 6$	12] $\frac{2}{3}(6x - 18) = -3x + 9$

Solve each equation.

13] $7a - 4 - 12a = 5(2a - 1)$

14] $-4(3m - 8) = 2(5m + 3)$

15] $3y + 3 = 8(y + 9) - 2y$

16] $4(3b + 1) = 2(b - 3) - 10$

17] $3(2x + 5) - 15 = 4x + 22 - 9x$

18] $3 - 6(-3x + 1) = 4 + 2x - 11$

19] $14 + 6x - 44 = -3(x - 5)$

20] $\frac{5}{6}(24m - 42) = 4(2m - 3)$