Upstate Homeschool Co-op

ALGEBRA 1 READINESS TEST

This Readiness Test can help CP and Honors students determine if they are ready to enroll in Algebra 1 at UHC. Algebra 1 requires your child to have successfully completed Pre-Algebra. This Readiness Test is highly encouraged, but not required for UHC enrollment purposes. It is the responsibility of the parent to administer the test and score it. **Parents acknowledge that their student has the necessary prerequisites upon enrolling their student in Algebra 1 at UHC.**

This test is not perfect, so please use common sense while making any final placement decisions. It is not necessary to time the test, but a proctor should make sure the student has a quiet space without distractions or outside resources. If necessary, the student can use their old Pre-Algebra textbook as a reference. **We recommend no calculator is used for this test.**

SCORING:

The test is divided into two sections. Section 1 is the simpler part of the test.

The student is most likely ready for Algebra 1 if (s)he makes the following scores on the two sections:

Section 1: 10 or more correct on problems 1 - 15**Section 2:** 10 or more correct on problems 16 - 31

If the student's score falls below this level, the student is recommended to enroll in Pre-Algebra at UHC or the student will have to extensively review Pre-Algebra prior to the new school year.

SECTION 1:

- 1. Add & Simplify: $\frac{3}{8} + \frac{1}{6}$ Keep your answer in the form of a fraction
- 2. Multiply & Simplify: $\frac{5}{8} \times 18$ Keep your answer in the form of a fraction
- 3. Divide & Simplify: $\frac{3}{4} \div 2$ Keep your answer in the form of a fraction
- 4. Add: 0.5 + 0.35 + 1.5
- 5. Subtract: 8.9 0.76
- 6. Multiply: 7.82×7.9
- 7. Divide: $\frac{5.82}{0.6}$
- 8. Evaluate: $\frac{x}{12}$ for x = 36
- 9. Subtract: -10 (-2)
- 10. Simplify 8 (- 4) + $\frac{16}{2}$
- 11. Evaluate: x^4 for x = 2
- 12. Evaluate: $(3a)^3$ for a = 2
- **13.** Calculate: $(6 \cdot 3)^2$
- 14. Multiply: $-\frac{1}{3} \cdot \frac{-5}{7}$ Keep your answer in the form of a fraction
- 15. Find the additive inverse of 34

SECTION 2:

16. Simplify: $\frac{9abc}{3ab}$ 17. Factor: 45 + 9y 18. Use <, >, or = in the square brackets: 1.38 [] 1.83 19. Write the algebraic expression: "5 more than a number, x" 20. Evaluate: a(3 + b) for a = 5 and b = 221. Simplify: 18 - (-15) - 3 - (-5) + 222. Collect Like Terms: 3x + 4x + 2y + y23. What is the reciprocal of $\frac{7}{8}$

- 24. Multiply 9(x 5)
- 25. Factor: 18z 12x 24
- 26. Simplify: 5y (3y + 4)
- 27. Calculate: $\sqrt{64}$
- 28. For the line y = mx + b, what does *m* represent?
- 29. For the line y = mx + b, what does b represent?
- 30. A rectangle is 3 in. wide and 2 in. long. What is the perimeter?
- 31. Factor out the Greatest Common Factor: $18x^2 + 9x$

ANSWER KEY:

Section 1 Answers:

Section 2 Answers:

1	13	16	3c
١.	24	17.	9(5 + v)
2.	$\frac{45}{4}$	18.	<
	4	19.	x + 5
3.	$\frac{3}{8}$	20.	25
Л	2.35	21.	37
4. 5	2.33	22.	7x + 3y
5. 6.	61.778	23.	8 7
7.	9.7	04	, 0.4 4 E
8.	3	24.	9x - 45
9.	-8	25.	6(3z - 2x - 4)
10.	-24	26.	2y - 4
11.	16	27	8
12.	216		
13.	324	28.	slope
14.	5	29.	y-intercept
15	21	30.	10 inches
15.	-34	31.	9x(2x + 1)

CONCEPTS TESTED IN EACH TEST PROBLEM:

Section 1:

- 1. Adding Fractions. Common Denominator. Simplifying Fractions.
- 2. Multiplying Fractions. Simplifying Fractions.
- 3. Dividing Fractions. Simplifying Fractions.
- 4. Adding Decimals
- 5. Subtracting Decimals
- 6. Multiplying Decimals
- 7. Dividing Decimals
- 8. Evaluating Expressions for a Specific x-value
- 9. Subtracting Negative Numbers
- 10. Order of Operations
- 11. Evaluating Expressions with Exponents for a Specific x-value
- 12. Evaluating Expressions with Exponents for a Specific Value
- 13. Order of Operations
- 14. Multiplying Negative Fractions
- 15. Additive Inverse

Section 2:

- 16. Simplifying Rational Expressions. .
- 17. Factor Binomials
- 18. Inequalities
- 19. Writing Algebraic Expressions (Word Problems)
- 20. Evaluating Expressions with Specific Values
- 21. Subtracting Negative Numbers
- 22. Collecting Like Terms
- 23. Reciprocal of Fractions
- 24. Distributing
- 25. Factoring
- 26. Distributing & Collecting Like Terms
- 27. Square Roots
- 28. Slope of a Line
- 29. Y-interept of a Line
- 30. Perimeter of a Rectangle
- 31. Greatest Common Factor

If your student scores below the recommended level on the readiness test,

we recommend you consider using one or more of the following resources to review and prepare for class in the fall:

- Study with an online resource such as Khan Academy
- Study with a previously used math textbook (or purchase a used one)
- Hire a private tutor
- Add a virtual math lab to your UHC enrollment course list

If your student does well on this assessment, it is recommended that this assessment be used as a review closer to the start of school. This will provide a refresher of the concepts that may have been forgotten over the summer.

*Please note that the Readiness Test is NOT the same thing as the Summer Assignment.