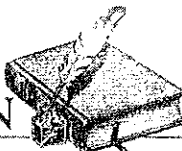# Entrance Exam Preparation - Tenth Grade

Expected time for testing: 2 hours
(Higher-level math students may take longer)

Subject	Assessment Content	Approx. Time
Math	Mastery of Math Facts test: Addition, subtraction, multiplication & division (two minutes for each test)	10 minutes
	Math Concepts test: Four-digit addition and subtraction, decimals, long-division, fractions, rounding, algebra 1, geometry, square root, Pythagorean Theorem	20 – 30 minutes (depending on level being assessed)
Reading & Comprehension	Reading and comprehension (3 tests, 3 minutes per story): Read 3 short stories and answer questions in multiple-choice format	10 minutes
Spelling	Spelling test	10 minutes
Grammar	Grammar test: Identifying parts of speech: verb, noun, pronoun, adverb, adjective, conjunction, preposition, appositives, plurals, articles; Dissecting sentences: identify subjects, verbs and modifiers; Showing understanding of capitalization, punctuation and use of synonyms, antonyms, homonyms and homophones	No time limit (most students complete within 20 minutes)
Writing	Composition: Student is required to write a paragraph or more in cursive on a topic of his/her choice.	10 minutes

AMERICAN HERITAGE

SCHOOL & FAMILY EDUCATION CENTER

Intake Academic Assessment Summary

Student Name _____ Age_____ Grade Level (Current) _____ Date_____

Teacher Conducting Assessment _____ Administration Review_____

Subject Assessed	Time Allocation	Score	Notes
Math Facts			
Addition			
Subtraction			
Multiplication			
Division			
Math Concepts			
Reading Comprehension			
Word Decoding			
Spelling			
Orthography			
Composition			

Recommendations: _____

_____

_____

_____

Note to Parents: The results of this Intake Academic Assessment are based upon performance standards and expectations of American Heritage School students for the age or grade level indicated above. This assessment is intended to measure current performance only and is used as one of various considerations in the School's intake process to make admission and grade level placement decisions. Thank you for your interest in American Heritage School. Our mission is to serve you in developing the hearts, minds, and bodies of your children as we strive together to magnify the divine potential of students and families.

SHOW YOUR WORK   Name: _____

1. Dak deposited $4000 in an account that earns 4% interest compounded annually.

   (a) Write an equation that expresses the amount of money in the account as a function of n, where n equals the number of years since the original deposit was made.

   (b) Use the equation in (a) and a calculator to determine how much money will be in the account after 9 years.

   (c) How much interest will have been earned after 9 years?

2. The distance a body falls varies directly as the square of the time that it falls. If it falls 867 meters in 17 seconds, how far will it fall in 4 seconds?

3. Yellows vary inversely as grays cubed. When there are 270 yellows, there are 2 grays. How many yellows are present when there are 6 grays?

4. Construct a box-and-whisker plot of the following numbers:

$$51, 59, 43, 30, 38, 42, 49, 69, 68, 40, 67, 65$$

5. Find the equation of the line that passes through the points $(4, -1)$ and $(-5, -3)$.

6. Graph on a number line: $-2 < -x + 3 < 4; \ D = \{\text{Reals}\}$

Factor:

7. $4m^2 + 96m - 2m^3$

8. $2k^2 - 5k - 12$

Solve by factoring:

9. $-5x = 6 - x^2$

10. $-x - 20 = -x^2$

Solve by completing the square:

11. $x^2 - 5 = 4x$

12. $12x = -x^2 - 11$

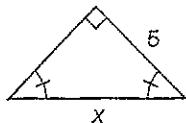Solve by using the quadratic formula:

13. $2x^2 = 12x + 3$

14. $-2x^2 - 6x = -3$

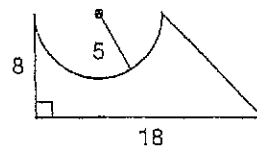15. Graph the following inequality on a rectangular coordinate system: $x \le 2$

16. Graph the following equation on a rectangular coordinate system: $y - 5 = -\dfrac{9}{4}x$
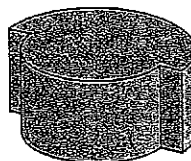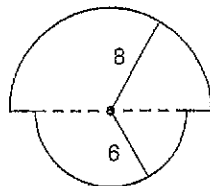
17. If $d(x) = x^2 - 6x - 6$, find $d(x - 1)$.

18. Use the Pythagorean theorem to find x.

19. Find the area of this figure. Dimensions are in inches.

20. A base of a right solid whose height is 7 feet is shown. Find the surface area of the solid. Dimensions are in feet.

Algebra 1, Third Edition

Limited Warranty

57

The Nomistake Electric Typewriter is guaranteed for the period of six months from the date of original purchase to be free from defects in material and workmanship, with the following conditions: that the typewriter has been used as directed by its operating instructions; that no repairs have been made except by factory approved repair workers.

This warranty does not cover damage caused by carelessness or rough handling.

In the event that this typewriter is resold within six months of the original purchase, the warranty can be transferred to the new owner.

Upon notification, the Nomistake Corporation will replace, free of charge, any defective parts if all conditions of this warranty have been met. Should your typewriter require repairs, contact your local Nomistake Repair Center.

The Nomistake Corporation, Boston, MA.

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1. **The Nomistake Electric Typewriter is guaranteed for** Ⓐ all time Ⓑ one year Ⓒ six months Ⓓ three months
2. **The Nomistake Electric Typewriter is guaranteed to be** Ⓐ easy to operate Ⓑ put together properly Ⓒ unbreakable Ⓓ fool proof
3. **For this guarantee to be good, the buyer must** Ⓐ pay extra money Ⓑ fill in a card Ⓒ follow the operating instructions Ⓓ be a good typist
4. **If something goes wrong with the typewriter, you are supposed to** Ⓐ write the company in Boston Ⓑ take it back to where you bought it Ⓒ resell it Ⓓ contact the local Nomistake Repair Center
5. **If something is wrong with the way this typewriter was made, the company will** Ⓐ replace the defective parts Ⓑ give you a new typewriter Ⓒ give you your money back Ⓓ loan you a new typewriter
6. **This guarantee will be no good if** Ⓐ you bought the typewriter second hand Ⓑ the typewriter was dropped on the floor Ⓒ the store where you bought the typewriter closed Ⓓ you lose the instructions
7. **If you try to repair the typewriter yourself, the company will** Ⓐ never repair it Ⓑ charge you to repair it Ⓒ give you new parts free Ⓓ tell you how to repair it correctly
8. **If all the conditions have been met, the corporation will** Ⓐ return your money Ⓑ change the parts that don't work Ⓒ notify you Ⓓ send the machine to Boston

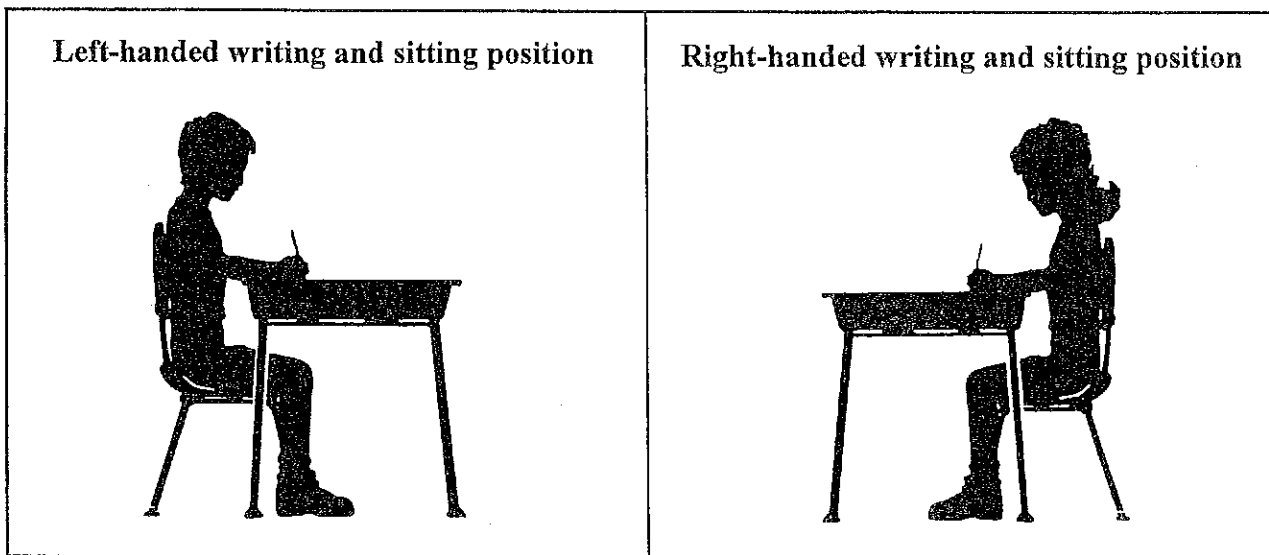| No. right	1	2	3	4	5	6	7	8
G score	5.2	6.1	7.1	8.1	9.4	10.5	11.8	12.9+

1. **Improper and uncomfortable seating arrangements** in classrooms probably cause a large number of inattention and hyperactivity problems. The chair should be *ergonomically* correct to support the child's back and general posture. Schools should give as much attention to the physical needs of children in a classroom as large corporations do for their employees. This is for productivity, comfort and safety.

2. **Though sitting and lounging about on the floor, or in beanbag chairs, bathtubs, etc.,** has become quite popular in some classrooms, we do not think it affords the comfort or physical ease needed for accurate writing and spelling. The sketches below show correct seating for this method to work as prescribed.

B. **Prepare to teach letter strokes beginning in the next section.**

1. **Have students clear all materials from the desk top** except name tag, dotted-line paper and a No. 2, six-sided, black lead pencil.

2. **Desks are already adjusted for proper height for each student's feet to be flat on the floor,** spines straight against the back rest, head held high and arm position as shown in the pictures below for left and right-handed students.

   a. **A student's head should not be allowed to fall forward** because this causes strain on the back and neck muscles.

   b. **Both arms should rest comfortably on the desk;** elbows should be just off the edge.

   c. **The body should not touch the front edge of the desk.** This causes a tendency to lean on the desk, which places strain on the neck and shoulder muscles.

Left-handed writing and sitting position	Right-handed writing and sitting position

Directions: Trace and repeat the patterns below.

llll _____   eeee _____

iiii _____   oooo _____

rrr _____   ss s _____

mmmm _____

Directions: Copy the letters in the space provided.

A ____ B ____ C ____ D ____ E ____

F ____ G ____ H ____ I ____ J ____

K ____ L ____ M ____ N ____ O ____

P ____ Q ____ R ____ S ____ T ____

U ____ V ____ W ____ X ____

Y ____ Z ____

a ____ b ____ c ____ d ____ e ____

f ____ g ____ h ____ i ____ j ____

k ____ l ____ m ____ n ____ o ____

p ____ q ____ r ____ s ____ t ____

Directions: Trace and repeat the patterns below.

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mmm _____

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rrr _____

ssss _____

Directions: Copy the letters in the space provided.

a _____ b _____ c _____ d _____ e _____

f _____ g _____ h _____ i _____ j _____

k _____ l _____ m _____ n _____

o _____ p _____ q _____ r _____ s _____

t _____ u _____ v _____ w _____

x _____ y _____ z _____

Practice Sheet

Aa   Bb

Cc   Dd

Ee   Ff

Gg   Hh

Ii   Jj

Kk   Ll

Mm   Nn

Oo   Pp

Qq   Rr

Ss   Tt

Uu   Vv

Ww   Xx

Yy   Zz

u _____ *v* _____ *w* _____ *x* _____

y _____ *z* _____

Directions: Copy the following quote on the lines provided. The prophet Heber J. Grant was fond of this saying.

"That which we persist in doing becomes easier for us to do, not that the nature of the thing itself is changed, but our power to do is increased."
—Ralph Waldo Emerson