PART I: VOCABULARY (10 minutes): Choose the best definition for each bolded vocabulary item.

**Sample 1**
Flexible means (A) firm to the touch (B) easily bent (C) shapeless (D) smooth.

**Sample 2**
A contagious disease is (A) dangerous (B) preventable (C) treatable (D) infectious.

**Answers:**
Sample 1: (B) easily bent is the best definition of flexible.
Sample 2: (D) infectious is the best definition of contagious.

PART II: READING COMPREHENSION (40 minutes): You are asked to read passages on a wide variety of subjects and to answer questions about main idea, inference, meaning or words in context, tone, or purpose. For each question, decide on the basis of the passage which one of the choices best answers the question:

**Sample passage:**
The African elephant population has declined rapidly over the past twenty-five years. During this time, farmers have cleared and planted land where elephants once fed, and they chase off or kill elephants that raid their crops. Also, ivory hunting, which is now illegal but which still persists, has reduced the elephant herds dramatically.

**Sample 1**
The best title for this passage is

A. The African Elephant  
B. Living in Africa  
C. The Decline of the African Elephant  
D. Elephant Life-Cycles

The correct answer is C.

**Sample 2**
“Declined” in line 1 means

A. increased.  
B. decreased  
C. remained the same.  
D. disappeared.

The correct answer is B.

PART III: WRITING (40 minutes) – The writing test has three parts:

**Identifying Errors:**
Read each sentence below and decide if any underlined portion contains an error in spelling, punctuation, capitalization, word choice, grammar, or sentence structure. If there is an error, note the letter printed underneath the line, and mark that letter on your answer sheet. If there is no error in any part of the sentence, mark D for no error.
Sample: Having walked to the library to borrow a book, Julia and I
\[ A \]
was upset to find that it was not open. No error.
\[ B \]
\[ C \]
\[ D \]

Answer: The correct answer is B. The singular verb “was” does not agree with the plural subjects “Julia and I.”

Recognizing Main Ideas and Supporting Statements:
You will read a main idea or main point, followed by four statements. Choose the statement that best supports or illustrates the main point given.

Sample
Main idea: George spent a lot of time preparing for his CCSF final exams.

Support or illustration for that statement:

A George is a hard-working student.
B George will probably do well on his final exams.
C George may have taken too many units this semester.
D In the last two weeks, he has studied over 30 hours.

Answer: The only answer that shows or supports the idea that George spent a lot of time is statement D, which shows how many hours he has spent.

Rewriting Sentences
These questions ask you to rewrite sentences in your head. You will be given a sentence, followed by a different way to begin the new sentence. Then you will be asked to choose the next words that would most appropriately and logically complete the sentence. The new sentence should have the same meaning as the original one.

In choosing answers, follow the requirements of standard written English. Answer according to correct or conventional usage in grammar, choice of words, sentence construction, and punctuation. The answer you choose should produce the most effective sentence.

Sample: When Karen entered the classroom, she noticed that many desks were missing.

Rewrite, beginning with

Entering the classroom.

The sentence will be completed by

A many desks were missing.
B and noticing that many desks were missing.
C Karen noticed that many desks were missing.
D so Karen noticed that many desks were missing.

Answer: C is correct. It is the only choice that correctly completes the sentence.
Listening Comprehension

This is a test of your ability to understand spoken English. On this tape recording, you will hear sentences that are not written down in the test booklet. You will hear each sentence two times. Read the three answers in your booklet and select the one answer that you believe is correct.

Example: You will hear: “The camera on the desk is expensive.”

You will read: A. The camera is expensive.
              B. The desk is expensive.
              C. The camera and the desk are expensive.

The correct answer is A: The camera is expensive.

Reading

Read the passage and answer the questions that follow.

Example:

Before 1800, most people throughout the world lived in small villages in the countryside and worked on the land. But since then, more and more people have lived and worked in much larger communities. Today, more than half of the world’s population lives in towns and cities.

Answer the following sample questions:

Question 1:

Most people in the world today
   A. live in small villages.
   B. live in the countryside.
   C. live in towns and cities.
   D. work on the land.

The correct answer is C: “Most people in the world today live in towns or cities.”

Question 2:

In Line 1, “throughout the world” means
   A. outside the world
   B. in the middle of the world
   C. during the world
   D. around the world

The correct answer is D: “around the world”

Grammar

Part 1: Sentence Completion

Choose the word (or group of words) that best completes the sentence.

Example: “What is the name of your new restaurant?”

   A. calls
   B. called
   C. is calling
   D. is called

The correct answer is D: is called.
Part 2: Error Identification

The items in this part of the test are complete statements. However, one of the underlined words or phrases in each statement is not correct. Find the wrong word or phrase.

Example: The students which wanted to take extra classes had to get approval from their teachers.

A. which
B. to take
C. had
D. teachers.

The wrong word is A: which.

Part 3: Sentence Rewriting

You will see a sentence. You will rewrite the sentence, beginning with the underlined group of words (in A, B, C, or D) that best complete the new sentence. The new sentence should have the same meaning as the first sentence.

Example:
I haven’t been to England since I was ten years old.

Rewrite, beginning with

A. when I was ten years old.
B. when I am ten years old.
C. during I was ten years old.
D. after I was ten years old

The correct answer is A: when I was ten years old.
Sample Questions for the ARITHMETIC TEST

Please review the sample questions to help you decide which math placement test to begin with.

If you answer 7 or fewer questions correctly, begin with the ARITHMETIC TEST.

If you answer 8 or more questions correctly, begin with the ELEMENTARY ALGEBRA TEST.

1. A student wants to schedule his time to study for his English, math, and chemistry exams. He plans to spend 1/3 of his time studying English and 1/6 of his time studying math. What portion of time remains for him to study for his chemistry exam?

   A. \( \frac{1}{2} \)
   B. \( \frac{1}{4} \)
   C. \( \frac{1}{6} \)
   D. \( \frac{1}{9} \)

2. John drove his new car to Los Angeles, which is 320 miles from his house. He used 12 gallons of gas. He wants to know how many miles he traveled per gallon of gas. Which one of the following expressions must he use?

   A. \( 12 \div 320 \)
   B. \( 320 \div 12 \)
   C. \( \frac{12}{320} \)
   D. \( 12 \times 320 \)

3. Mr. Jones sold his house for $1,000,000 this year. The sale price is 40% more than the original purchase price. Which price is closest to the original purchase price?

   A. $400,000
   B. $600,000
   C. $625,000
   D. $715,000

4. \( 5 \frac{1}{9} - 2 \frac{1}{6} = \)

   A. \( 2 \frac{4}{9} \)
   B. \( 2 \frac{17}{18} \)
   C. \( 3 \frac{1}{18} \)
   D. \( 3 \frac{1}{3} \)

5. \( 1.3 \overline{793} \)

   In the problem above, the quotient is closest to which of the following?

   A. 6
   B. 60
   C. 600
   D. 6000
6. Last week Patricia earned $280. She set aside 15 percent of this money to buy books that cost $12 each. What is the greatest number of books that she could buy?

A. 1  
B. 3  
C. 4  
D. 42

7. If 7% of a number is 21, what is the number?

A. 1.47  
B. 14.7  
C. 30  
D. 300

8. All of the following are ways to write 25 percent of N, except:

A. 0.25N  
B. \( \frac{25N}{100} \)  
C. \( \frac{N}{4} \)  
D. 25N

9. \( \frac{9}{20} = \)

A. 0.045  
B. 2.22  
C. 0.45  
D. 4.5

10. \( 8.86 \times 5.6 = \)

A. 49.616  
B. 49.936  
C. 469.16  
D. 496.16

11. Which of the following is the least?

A. 0.307  
B. 0.703  
C. 0.037  
D. 0.37

Answers: 1. (A) 2. (B) 3. (D) 4. (B) 5. (C) 6. (B) 7. (D) 8. (D) 9. (C) 10. (A) 11. (C)
Sample Questions for the ELEMENTARY ALGEBRA TEST

Please review the sample questions to help you decide which math placement test to begin with.

If you answer 5 or fewer questions correctly, begin with the ARITHMETIC TEST.

If you answer 6 or more questions correctly, begin with the ELEMENTARY ALGEBRA TEST.

1. If \( x = -4 \), \( y = 3 \), and \( z = -1 \), find the value of \( 3x + 2(y - z) \)
   A. \(-4\)  B. \(-5\)  C. \(-8\)  D. \(-20\)  E. \(-40\)

2. Solve for \( x \): \( 4(x - 5) = 1 - 3x \)
   A. \(\frac{-19}{7}\)  B. \(\frac{6}{7}\)  C. \(\frac{10}{3}\)  D. 3  E. 21

3. Subtract: \( 5x - 2 - 2 \cdot 3x + 4 \)
   A. \(\frac{15x}{14}\)  B. \(\frac{2}{15x^2}\)  C. \(\frac{3}{15x^2}\)  D. \(\frac{2}{15x^2 - 6x}\)  E. \(\frac{2}{3x - 5x^2}\)

4. Find the solution to the following system of equations:
   \[
   \begin{align*}
   3x + y &= 4 \\
   5x - 3y &= -5
   \end{align*}
   \]
   A. \((1, 1)\)  B. \((1, 5)\)  C. \((-\frac{1}{2}, -\frac{5}{2})\)  D. \((\frac{5}{2}, 1)\)  E. \((\frac{1}{2}, \frac{5}{2})\)

5. Multiply and express the answer in lowest terms: \( \frac{x^2 + 3x - 10}{6x^3} \cdot \frac{3x^2}{(x-2)} \)
   A. \(\frac{x+5}{2x}\)  B. \(\frac{x+5}{3x}\)  C. \(\frac{(x-5)(x+2)}{2x(x-2)}\)  D. \(\frac{(x+5)(x+2)}{2x(x-2)}\)  E. \(\frac{(3x-10)(3+6x)}{-24}\)

6. Simplify: \(\sqrt{48x^5}\)
   A. \(4\sqrt{3x^5}\)  B. \(16\sqrt{3x^5}\)  C. \(4x^2\sqrt{3x}\)  D. \(16x^2\sqrt{3x}\)  E. \(16x^4\sqrt{3x}\)

7. Simplify: \((81x^{-3}y^{-12})^{\frac{1}{4}}\)
   A. \(-3x^2y^3\)  B. \(\frac{3y^3}{x^2}\)  C. \(\frac{3y^3}{x^2}\)  D. \(\frac{81y^3}{x^2}\)  E. \(\frac{81y^3}{4x^2}\)

8. Let \( f(x) = x^2 - 3x + 1 \). Evaluate \( f(a + 3) \)
   A. \(a^2 - 3a + 1\)  B. \(a^2 + 3a + 1\)  C. \(a^2 + 3a + 2\)  D. \(a^2 - 3a + 4\)  E. \((x^2 - 3x + 1)(a+3)\)

9. Susan has 2 more than 4 times as many books as her roommate has. Together they have 42 books. Which of the following equations could be used to determine the number of books Susan has?
   A. \(4(x+2) = 42\)
   B. \(x + 4(x+2) = 42\)
   C. \(4x + 2 = 42\)
   D. \(4x + 2 + x = 42\)
10. Henry paints $X$ feet of fence in 6 hours. If he continues to paint at the same average rate, how many more feet of fence will he paint in the next 5 hours?

A. $\frac{6x}{5}$
B. $\frac{5x}{6}$
C. $\frac{x+5}{6}$
D. $\frac{x}{6} + 5$

Answers: 1. (A) 2. (D) 3. (D) 4. (E) 5. (A) 6. (C) 7. (C) 8. (B) 9. (D) 10. (B)
ACCUPLACER®
Sample Questions for Students

Revised December 2007
Arithmetic

This test measures your ability to perform basic arithmetic operations and to solve problems that involve fundamental arithmetic concepts. There are 17 questions on the Arithmetic tests, divided into three types.

- Operations with whole numbers and fractions: Topics included in this category are addition, subtraction, multiplication, division, recognizing equivalent fractions and mixed numbers, and estimating.

- Operations with decimals and percents: Topics include addition, subtraction, multiplication, and division with decimals. Percent problems, recognition of decimals, fraction and percent equivalencies, and problems involving estimation are also given.

- Applications and problem solving: Topics include rate, percent, and measurement problems; simple geometry problems; and distribution of a quantity into its fractional parts.
Arithmetic Sample Questions

Solve the following problems and select your answer from the choices given. You may use the paper you have been given for scratch paper.

1. \(2.75 + .003 + .158 =\)
   A. 4.36  
   B. 2.911  
   C. 0.436  
   D. 2.938

2. \(7.86 \times 4.6 =\)
   A. 36.156  
   B. 36.216  
   C. 351.56  
   D. 361.56

3. \(\frac{7}{20} =\)
   A. 0.035  
   B. 0.858  
   C. 0.35  
   D. 3.5

4. Which of the following is the least?
   A. 0.105  
   B. 0.501  
   C. 0.015  
   D. 0.15

5. All of the following are ways to write 25 percent of N EXCEPT
   A. 0.25 N  
   B. \(\frac{25N}{100}\)  
   C. \(\frac{1}{4} N\)  
   D. 25 N

6. Which of the following is closest to \(27.8 \times 9.6 =\)
   A. 280  
   B. 300  
   C. 2,800  
   D. 3,000

7. A soccer team played 160 games and won 65 percent of them. How many games did it win?
   A. 94  
   B. 104  
   C. 114  
   D. 124

8. Three people who work full-time are to work together on a project, but their total time on the project is to be equivalent to that of only one person working full-time. If one of the people is budgeted for one-half of his time to the project and a second person for one-third of her time, what part of the third worker’s time should be budgeted to this project?
   A. \(\frac{1}{3}\)  
   B. \(\frac{3}{5}\)  
   C. \(\frac{1}{6}\)  
   D. \(\frac{1}{8}\)

9. 32 is 40 percent of what number?
   A. 12.8  
   B. 128  
   C. 80  
   D. 800

10. \(3\frac{1}{3} - 2\frac{2}{5} =\)
    A. 1 \(\frac{1}{2}\)  
    B. \(\frac{1}{15}\)  
    C. \(\frac{14}{15}\)  
    D. 1 \(\frac{1}{15}\)

Elementary Algebra

A total of 12 questions of three types are administered in this test.

- The first type involves operations with integers and rational numbers, and includes computation with integers and negative rationals, the use of absolute values, and ordering.
- The second type involves operations with algebraic expressions using evaluation of simple formulas and expressions, and adding and subtracting monomials and polynomials. Questions involve multiplying and dividing monomials and polynomials, the evaluation of positive rational roots and exponents, simplifying algebraic fractions, and factoring.
- The third type of question involves translating written phrases into algebraic expressions and solving equations, inequalities, word problems, linear equations and inequalities, quadratic equations (by factoring), and verbal problems presented in an algebraic context.
Elementary Algebra
Sample Questions

Solve the following problems and select your answer from the choices given. You may use the paper you have been given for scratch paper.

1. If A represents the number of apples purchased at 15 cents each, and B represents the number of bananas purchased at 10 cents each, which of the following represents the total value of the purchases in cents?
   A. A + B
   B. 25(A + B)
   C. 10A + 15B
   D. 15A + 10B

2. \( \sqrt{2} \times \sqrt{\frac{1}{5}} = ? \)
   A. 17
   B. 30
   C. \( \sqrt{30} \)
   D. \( \sqrt{17} \)

3. What is the value of the expression \( 2x^2 + 3xy - 4y^2 \) when \( x = 2 \) and \( y = -4 \)?
   A. -80
   B. 80
   C. -32
   D. 32

4. In the figure below, both circles have the same center, and the radius of the larger circle is \( R \). If the radius of the smaller circle is 3 units less than \( R \), which of the following represents the area of the shaded region?
   A. \( \pi R^2 \)
   B. \( \pi (R - 3)^2 \)
   C. \( \pi R^2 - \pi \times 3^2 \)
   D. \( \pi R^2 - \pi (R - 3)^2 \)

5. \( (3x - 2y)^2 = \)
   A. \( 9x^2 - 4y^2 \)
   B. \( 9x^2 + 4y^2 \)
   C. \( 9x^2 + 4y^2 - 6xy \)
   D. \( 9x^2 + 4y^2 - 12xy \)

6. If \( x > 2 \), then \( \frac{x^2 - x - 6}{x^2 - 4} = \)
   A. \( \frac{x - 3}{2} \)
   B. \( \frac{x - 3}{x - 2} \)
   C. \( \frac{x - 3}{x + 2} \)
   D. \( \frac{3}{2} \)

7. \( \frac{4 - (-6)}{-5} = \)
   A. \( \frac{2}{5} \)
   B. \(-\frac{2}{5}\)
   C. 2
   D. -2

8. If \( 2x - 3(x + 4) = -5 \), then \( x = \)
   A. 7
   B. -7
   C. 17
   D. -17

9. \( -3(5 - 6) - 4(2 - 3) = \)
   A. -7
   B. 7
   C. -1
   D. 1

10. Which of the following expressions is equivalent to \( 20 - \frac{4}{5}x \geq 16? \)
    A. \( x \leq 5 \)
    B. \( x \geq 5 \)
    C. \( x \geq 32\frac{1}{2} \)
    D. \( x \leq 32\frac{1}{2} \)

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College-Level Mathematics Test

The College-Level Mathematics test measures your ability to solve problems that involve college-level mathematics concepts. There are six content areas measured on this test: (a) Algebraic Operations, (b) Solutions of Equations and Inequalities, (c) Coordinate Geometry, (d) Applications and other Algebra Topics, (e) Functions, and (f) Trigonometry. The Algebraic Operations content area includes the simplification of rational algebraic expressions, factoring and expanding polynomials, and manipulating roots and exponents. The Solutions of Equations and Inequalities content area includes the solution of linear and quadratic equations and inequalities, systems of equations, and other algebraic equations. The Coordinate Geometry content area presents questions involving plane geometry, the coordinate plane, straight lines, conics, sets of points in the plane, and graphs of algebraic functions. The Functions content area includes questions involving polynomial, algebraic, exponential, and logarithmic functions. The Trigonometry content area includes trigonometric functions. The Applications and other Algebra Topics content area includes complex numbers, series and sequences, determinants, permutations and combinations, factorials, and word problems. A total of 20 questions are administered on this test.

Sample Questions

Solve the problem. Use the paper you were given for scratchwork.

1. \[ 2^\frac{5}{3} \times 2^\frac{1}{3} \]
   A. \( 2^\frac{1}{3} \)
   B. 2
   C. \( 2^\frac{1}{3} \)
   D. \( 2^\frac{5}{3} \)
   E. \( 2^1 \)

2. If \( a \neq b \) and \( \frac{1}{x} + \frac{1}{a} = \frac{1}{b} \), then \( x = \)
   A. \( \frac{1}{b} - \frac{1}{a} \)
   B. \( b - a \)
   C. \( \frac{1}{ab} \)
   D. \( \frac{a - b}{ab} \)
   E. \( \frac{ab}{a - b} \)

3. If \( 3x^2 - 2x + 7 = 0 \), then \( (x - \frac{1}{3})^2 = \)
   A. \( \frac{20}{9} \)
   B. \( \frac{7}{9} \)
   C. \( \frac{7}{9} \)
   D. \( \frac{8}{9} \)
   E. \( \frac{20}{9} \)

4. The graph of which of the following equations is a straight line parallel to the graph of \( y = 2x \)?
   A. \( 4x - y = 4 \)
   B. \( 2x - 2y = 2 \)
   C. \( 2x - y = 4 \)
   D. \( 2x + y = 2 \)
   E. \( x - 2y = 4 \)

5. An equation of the line that contains the origin and the point \((1, 2)\) is
   A. \( y = 2x \)
   B. \( 2y = x \)
   C. \( y = x - 1 \)
   D. \( y = 2x + 1 \)
   E. \( y = x - 1 \)

6. An apartment building contains 12 units consisting of one- and two-bedroom apartments that rent for $360 and $450 per month, respectively. When all units are rented, the total monthly rental is $4,950. What is the number of two-bedroom apartments?
   A. 3
   B. 4
   C. 5
   D. 6
   E. 7
7. If the two square regions in the figures below have the respective areas indicated in square yards, how many yards of fencing are needed to enclose the two regions?

\[
\text{125}
\]

A. \(4\sqrt{130}\)  
B. \(20\sqrt{10}\)  
C. \(24\sqrt{5}\)  
D. 100  
E. \(104\sqrt{5}\)

8. If \(\log_{10}x = 3\), then \(x =\)

A. \(3^{10}\)  
B. 1,000  
C. 30  
D. \(\frac{10}{3}\)  
E. \(\frac{3}{10}\)

9. If \(f(x) = 2x + 1\) and \(g(x) = \frac{x - 1}{2}\), then \(f(g(x)) =\)

A. \(x\)  
B. \(\frac{x - 1}{4x + 2}\)  
C. \(\frac{4x + 2}{x - 1}\)  
D. \(\frac{5x + 1}{2}\)  
E. \(\frac{(2x + 1)(x - 1)}{2}\)

10. If \(\theta\) is an acute angle and \(\sin \theta = \frac{1}{2}\), then \(\cos \theta =\)

A. \(-1\)  
B. 0  
C. \(\frac{1}{2}\)  
D. \(\frac{\sqrt{3}}{2}\)  
E. 2
### Answer Key

#### ARITHMETIC

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