Preparing for the Placement Assessment at Allegany College of Maryland

Sample Questions for Students

Revised: December 2007 (ACCUPLACER)
Sample Questions for Students

Information About the ACCUPLACER Assessment

On Campus
To schedule an assessment call the following numbers:

  Cumberland Campus: 301-784-5554
  Bedford Campus: 814-652-9528 ext. 6204
  Somerset Campus: 814-445-9848 ext. 6135

Off Campus
Contact your high school guidance counselor or testing coordinator at your local college who will be proctoring the assessment. If they agree to proctor your assessment schedule a date and time and have them contact:

  Testing Lab Assistant
  Student Success Center
  Allegany College of Maryland
  301-784-5554
  testing@allegany.edu

With the following information:
  • Proctor’s name, title, and contact information.
  • School’s name and address.
  • Student’s name and the date test will be administered.

Please contact the testing lab assistant with at least a three day notice to allow time to set up the system.

Sentence Skills
In an ACCUPLACER® placement test, there are 20 Sentence Skills questions of two types.

  • The first type is sentence correction questions that require an understanding of sentence structure. These questions ask you to choose the most appropriate word or phrase for the underlined portion of the sentence.

  • The second type is construction shift questions. These questions ask that a sentence be rewritten according to the criteria shown while maintaining essentially the same meaning as the original sentence.

Within these two primary categories, the questions are also classified according to the skills being tested. Some questions deal with the logic of the sentence, others with whether or not the answer is a complete sentence, and still others with the relationship between coordination and subordination.
Sentence Skills Sample Questions

Directions for questions 1–5

Select the best version of the underlined part of the sentence. The first choice is the same as the original sentence. If you think the original sentence is best, choose the first answer.

1. Stamp collecting being a hobby that is sometimes used in the schools to teach economics and social studies.
   A. being a hobby that is
   B. is a hobby because it is
   C. which is a hobby
   D. is a hobby

2. Knocked sideways, the statue looked as if it would fall.
   A. Knocked sideways, the statue looked
   B. The statue was knocked sideways, looked
   C. The statue looked knocked sideways
   D. The statue, looking knocked sideways,

3. To walk, biking, and driving are Pat’s favorite ways of getting around.
   A. To walk, biking, and driving
   B. Walking, biking, and driving
   C. To walk, biking, and to drive
   D. To walk, to bike, and also driving

4. When you cross the street in the middle of the block, this is an example of jaywalking.
   A. When you cross the street in the middle of the block, this
   B. You cross the street in the middle of the block, this
   C. Crossing the street in the middle of the block
   D. The fact that you cross the street in the middle of the block

5. Walking by the corner the other day, a child I noticed, was watching for the light to change.
   A. a child, I noticed, was watching
   B. I noticed a child watching
   C. a child was watching, I noticed,
   D. there was, I noticed, a child watching

Directions for questions 6–10

Rewrite the sentence in your head following the directions given below. Keep in mind that your new sentence should be well written and should have essentially the same meaning as the original sentence.

6. It is easy to carry solid objects without spilling them, but the same cannot be said of liquids.
   Rewrite, beginning with
   Unlike liquids,
   The next words will be
   A. it is easy to
   B. we can easily
   C. solid objects can easily be
   D. solid objects are easy to be

7. Although the sandpiper is easily frightened by noise and light, it will bravely resist any force that threatens its nest.
   Rewrite, beginning with
   The sandpiper is easily frightened by noise and light,
   The next words will be
   A. but it will bravely resist
   B. nevertheless bravely resisting
   C. and it will bravely resist
   D. even if bravely resisting
8. If he had enough strength, Todd would move the boulder.
   Rewrite, beginning with
   Todd cannot move the boulder
   The next words will be
   A. when lacking
   B. because he
   C. although there
   D. without enough

9. The band began to play, and then the real party started.
   Rewrite, beginning with
   The real party started
   The next words will be
   A. after the band began
   B. and the band began
   C. although the band began
   D. the band beginning

10. Chris heard no unusual noises when he listened in the park.
    Rewrite, beginning with
    Listening in the park,
    The next words will be
    A. no unusual noises could be heard
    B. then Chris heard no unusual noises
    C. and hearing no unusual noises
    D. Chris heard no unusual noises

Reading Comprehension
Sample Questions
Directions for questions 1–5
Read the statement or passage and then choose the best answer to the question. Answer the question based on what is stated or implied in the statement or passage.

1. In the words of Thomas DeQuincey, “It is notorious that the memory strengthens as you lay burdens upon it.” If, like most people, you have trouble recalling the names of those you have just met, try this: The next time you are introduced, plan to remember the names. Say to yourself, “I’ll listen carefully; I’ll repeat each person’s name to be sure I’ve got it, and I will remember.” You’ll discover how effective this technique is and probably recall those names for the rest of your life.

The main idea of the paragraph maintains that the memory
A. always operates at peak efficiency.
B. breaks down under great strain.
C. improves if it is used often.
D. becomes unreliable if it tires.

2. Unemployment was the overriding fact of life when Franklin D. Roosevelt became president of the United States on March 4, 1933. An anomaly of the time was that the government did not systematically collect statistics of joblessness; actually it did not start doing so until 1940. The Bureau of Labor Statistics later estimated that 12,830,000 persons were out of work in 1933, about one-fourth of a civilian labor force of more than 51 million.

Roosevelt signed the Federal Emergency Relief Act on May 12, 1933. The president selected Harry L. Hopkins, who headed the New York relief program, to run FERA. A gifted administrator, Hopkins quickly put the program into high gear. He gathered a small staff in Washington and brought the state relief organizations into the FERA system. While the agency tried to provide all the necessities, food came first. City dwellers usually got an allowance for fuel, and rent for one month was provided in case of eviction.

This passage is primarily about
A. unemployment in the 1930s.
B. the effect of unemployment on United States families.
C. President Franklin D. Roosevelt’s presidency.
D. President Roosevelt’s FERA program.

3. It is said that a smile is universally understood. And nothing triggers a smile more universally than a taste of sugar. Nearly everyone loves sugar. Infant studies indicate that humans are born with an innate love of sweets. Based on statistics, a lot of people in Great Britain must be smiling because on average, every man, woman, and child in that country consumes 95 pounds of sugar each year.

From this passage it seems safe to conclude that the English
A. do not know that too much sugar is unhealthy.
B. eat desserts at every meal.
C. are fonder of sweets than most people.
D. have more cavities than any other people.

4. With varying success, many women around the world today struggle for equal rights. Historically, women have achieved greater equality with men during periods of social adversity. The following factors initiated the greatest number of improvements for women: violent revolution, world war, and the rigors of pioneering in an undeveloped land. In all three cases, the essential element that improved the status of women was a shortage of men, which required women to perform many of society’s vital tasks.

We can conclude from the information in this passage that
A. women today are highly successful in winning equal rights.
B. only pioneer women have been considered equal to men.
C. historically, women have only achieved equality through force.
D. historically, the principle of equality alone has not been enough to secure women equal rights.

5. In 1848, Charles Burton of New York City made the first baby carriage, but people strongly objected to the vehicles because they said the carriage operators hit too many pedestrians. Still convinced that he had a good idea, Burton opened a factory in England. He obtained orders for the baby carriages from Queen Isabella II of
Spain, Queen Victoria of England, and the Pasha of Egypt. The United States had to wait another 10 years before it got a carriage factory, and only 75 carriages were sold in the first year.

Even after the success of baby carriages in England,

A. Charles Burton was a poor man.
B. Americans were still reluctant to buy baby carriages.
C. Americans purchased thousands of baby carriages.
D. the United States bought more carriages than any other country.

6. All water molecules form six-sided structures as they freeze and become snow crystals. The shape of the crystal is determined by temperature, vapor, and wind conditions in the upper atmosphere. Snow crystals are always symmetrical because these conditions affect all six sides simultaneously.

The purpose of the passage is to present
A. a personal observation.
B. a solution to a problem.
C. actual information.
D. opposing scientific theories.

Directions for questions 7–10
For the questions that follow, two underlined sentences are followed by a question or statement. Read the sentences, then choose the best answer to the question or the best completion of the statement.

7. **The Midwest is experiencing its worst drought in 15 years.**
   Corn and soybean prices are expected to be very high this year.

   What does the second sentence do?
A. It restates the idea found in the first.
B. It states an effect.
C. It gives an example.
D. It analyzes the statement made in the first.

8. **Social studies classes focus on the complexity of our social environment.**
   The subject combines the study of history and the social sciences and promotes skills in citizenship.

   What does the second sentence do?
A. It expands on the first sentence.
B. It makes a contrast.
C. It proposes a solution.
D. It states an effect.

9. **Knowledge of another language fosters greater awareness of cultural diversity among the peoples of the world.**
   Individuals who have foreign language skills can appreciate more readily other peoples’ values and ways of life.

   How are the two sentences related?
A. They contradict each other.
B. They present problems and solutions.
C. They establish a contrast.
D. They repeat the same idea.

10. **Serving on a jury is an important obligation of citizenship.**
    Many companies allow their employees paid leaves of absence to serve on juries.

    What does the second sentence do?
A. It reinforces what is stated in the first.
B. It explains what is stated in the first.
C. It expands on the first.
D. It draws a conclusion about what is stated in the first.
WritePlacer®

This test measures your ability to write effectively, which is critical to academic success. Your writing sample will be scored on the basis of how effectively it communicates a whole message to the readers for the stated purpose. Your score will be based on your ability to express, organize, and support your opinions and ideas, not the position you take on the essay topic. The following five characteristics of writing will be considered:

- **Focus**—The clarity with which you maintain your main idea or point of view
- **Organization**—The clarity with which you structure your response and present a logical sequence of ideas
- **Development and Support**—The extent to which you elaborate on your ideas and the extent to which you present supporting details
- **Sentence Structure**—The effectiveness of your sentence structure
- **Mechanical Conventions**—The extent to which your writing is free of errors in usage and mechanics

**WritePlacer Sample Topic**

Prepare a multiple-paragraph writing sample of about 300–600 words on the topic below. You should use the time available to plan, write, review, and edit what you have written. Read the assignment carefully before you begin to write.

Some schools require each student to participate in an organized school sport chosen by the student. People at these schools argue that athletics is an important part of the educational experience and that there should be a rule requiring participation. Others argue that students should be free to decide whether or not they wish to participate in organized school sports. Write an essay for a classroom instructor in which you take a position on whether participation in organized school athletics should be required. Be sure to defend your position with logical arguments and appropriate examples. Your essay must be 300–600 words in length.

**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
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. \(\sqrt{2} \times \sqrt{15} = ?\)
   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. \(\pi R^2 - \pi(R - 3)^2\)

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.

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

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

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. \(\frac{y}{2} = x + 1\)

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?

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

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. \( \sqrt{3} \)
    E. 2

ACCUPLACER ESL Reading Skills Test

The ESL Reading Skills test measures your ability to read English. Specifically, it assesses your comprehension of short passages. It contains brief passages of 50 words or less and moderate length passages of 50 to 90 words. Half of this test contains straightforward comprehension items (paraphrase, locating information, vocabulary on a phrase level, and pronoun reference). The other half assesses inference skills (main idea, fact versus opinion, cause/effect logic, identifying irrelevant information, author’s point of view, and applying the author’s logic to another situation).

Sample Questions

1. Television has been introduced to almost every country in the world, reaching a large number of viewers on every continent. About 600 million people saw the first person walk on the moon, and a billion people watched the twentieth Olympic Games. Television has in many ways promoted understanding and cooperation among people. It does this by showing educational and cultural programs.

   According to the passage, which of the following is true?
   A. Television is watched in nearly every country.
   B. Not everybody who had a television set could watch the 1998 World Cup finals.
   C. Watching television makes people dissatisfied with their own lives.
   D. Television was invented in 1980.

   E. 2
2. Janet’s parents bought her a new sports car as a birthday present. It was blue. Janet sold her 7-year-old blue pickup truck to a high school student. The truck could not go very fast, but the student was happy with it.

According to the passage, which of these statements is true?
A. Janet bought a pickup truck and a sports car.
B. The pickup truck was faster than the sports car.
C. The high school student traded cars with Janet.
D. The pickup truck was older than the sports car.

3. Some of Edward Weston’s black-and-white photographs of American nature scenes are considered superb examples of visual art. Indeed, some of his photographs have commanded top prices at art galleries.

Which of the following best characterizes Weston’s photographs?
A. They belong to famous collectors.
B. They have been sold in art galleries for large sums of money.
C. They introduced many Americans to visual art.
D. They contrast American cities with natural settings.

4. Speaking to a group of people can be a frightening experience. Some speakers cope by looking above the heads of the audience. Others try to imagine that they are talking to a friend. A few try picturing the audience in some non-threatening way, such as in their pajamas.

The author of the passage assumes that speakers should
A. feel comfortable when addressing an audience.
B. scare the audience.
C. encourage people to talk during the speech.
D. speak only to familiar people.

5. People have different ways of learning. Some are better at making mental pictures of new ideas. Others are more comfortable with writing lists of things to memorize. Certain people can learn best when listening to music, while others need silence to concentrate.

Which of the following is the main idea of the passage?
A. Mental pictures help many to learn.
B. Some people prefer lists to making mental pictures.
C. To learn well you need to be comfortable.
D. Different individuals have different ways of acquiring information.

6. Before giving first aid to an accident victim, you should obtain his or her consent. Asking for consent takes a simple question. Say to the victim, “I know first aid, and I can help you until an ambulance arrives. Is that okay?”

“Asking for consent” means asking for
A. permission to help the victim.
B. thanks from the victim.
C. help from onlookers.
D. information about the victim’s injuries.

7. Jane and Paul are busy for 15 hours a day, 5 days a week going to college and working in a restaurant. They go to sleep at 11 p.m. every day, but on Sunday they take part in dance lessons.

According to the passage, Jane and Paul spend most of their time
A. at home.
B. going to college and working.
C. taking part in dance lessons.
D. sleeping.
8. If you hold a piece of copper wire over the flame of a match, heat will be conducted by the copper wire to your fingers, and you will be forced to drop the wire. You will, however, still be able to hold the match because the match is a poor conductor of heat. Anyone, child or adult, can try this simple experiment.

Which of the following is implied in the passage above?
A. Copper is a good conductor of heat.
B. A match and copper conduct heat equally.
C. A match is an excellent conductor of heat.
D. Matches should be kept out of the reach of small children.

9. Many people own different pets. Dogs, cats, birds, and fish are common household pets. Others pets are considered to be exotic animals. These include snakes, lizards, and hedgehogs.

Snakes are
A. uncommon pets.
B. likely to be found in a household with dogs.
C. found only in zoos.
D. not allowed in people’s homes.

10. Cesar Chavez was an influential leader for farmworkers. He fought for their rights and better working conditions. Chavez led many strikes that angered farm owners. Eventually he succeeded in getting increased wages and improved living situations for farmworkers.

Chavez changed lives because he
A. helped the farmers get more workers.
B. worked for the farmers.
C. helped work on the farms every day.
D. changed the conditions for the farmworkers.

ACCUPLACER ESL Sentence Meaning Test
The ESL Sentence Meaning test measures how well you understand the meaning of sentences in English. It assesses the understanding of word meanings in one- or two-sentence contexts. The sentences are drawn from the subject areas of natural science, history/social studies, arts/humanities, psychology/human relations, and practical situations. There are four content areas measured: (a) Particle, Phrasal Verbs, Prepositions of Direction; (b) Adverbs, Adjectives, Connectives Sequence; (c) Basic Nouns and Verbs; and (d) Basic and Important Idioms.

Sample Questions
The sentence below has a blank space. Choose the word or phrase that makes the sentence meaningful and correct.

1. Shikibu Murasaki, who wrote almost a thousand years ago, was one of the world’s ____ novelists.
   A. most early
   B. too early
   C. more early
   D. earliest

2. The Chang children ____ their parents by making sandwiches for the whole family.
   A. helped out
   B. helped with
   C. helps for
   D. helps to
3. As demonstrated by his last album, which was released after his death, Ibrahim Ferrer ____ one of the most beautiful voices in Latin music.
   A. had
   B. have
   C. have had
   D. having

4. After we saw the play, we had different opinions ____ Jane's performance.
   A. about
   B. at
   C. for
   D. towards

Each problem contains one or two sentences followed by a question. Choose the correct answer to the question.

5. Elena found a tomato that was much bigger than all the others in the garden.
   How did the tomato compare to the others in the garden?
   A. It was the smallest.
   B. It was not very large.
   C. It was larger than some.
   D. It was the largest.

6. When the popular entertainer canceled her appearance, the Latin American festival was postponed indefinitely.
   When will the festival likely take place?
   A. Tonight
   B. Tomorrow
   C. Next week
   D. Many weeks later

7. Janet is never late to meet her friends, and sometimes arrives early.
   Which best describes Janet?
   A. Lonely
   B. Punctual
   C. Talkative
   D. Tardy

8. Bram Stoker is best known for his classic horror novel Dracula, which was published in 1897.
   What did Bram Stoker do?
   A. He was a doctor.
   B. He was a merchant.
   C. He was a writer.
   D. He was an engineer.

9. Exhausted from her transatlantic flight, Judy could not stay up past 9 p.m.
   What did Judy do at 9 p.m.?
   A. Leave work
   B. Come home from the airport
   C. Lose her enthusiasm
   D. Go to bed

10. This semester many students are enrolled in a new course, African Dance, which is being taught by a first-time instructor, Sheila Duncan.
    How long has the university offered the African dance class?
    A. For a short time
    B. For many years
    C. For an entire school year
    D. On and off for a while
Sample Questions

The sentence below has a blank space. Choose the word or phrase that makes a grammatically correct sentence.

1. _____ washing her sweater, Mary hung it up to dry.
   A. After  
   B. Before  
   C. By  
   D. Until

2. Some day men and women _____ to Mars.
   A. will travel  
   B. will travels  
   C. will traveling  
   D. will traveled

3. Water _____ at a temperature of zero degrees Celsius.
   A. having frozen  
   B. freezing  
   C. freeze  
   D. freezes

4. _____ get a new haircut?
   A. Have you  
   B. Does you  
   C. Are you  
   D. Did you

5. Jacques Cousteau will be remembered for his inventions and for _____ to marine science.
   A. dedication  
   B. his dedication  
   C. being dedicated  
   D. his being dedicated

6. Since my parents always insist that I get a good night’s sleep, they were _____ when I stayed out last night past my curfew.
   A. very happy  
   B. very relieved  
   C. very tired  
   D. very angry

Read the two sentences below and choose the best way of combining them.

7. Her puppy ran out into the street chasing a cat. The owner quickly went to retrieve it.
   A. The owner quickly went to retrieve it after a cat was chased into the street by her puppy.  
   B. The owner quickly retrieved it after her puppy chased a cat into the street. 
   C. When her puppy ran into the street after a cat, the owner quickly went to retrieve the puppy. 
   D. Quickly retrieving it, the owner went quickly after her puppy that ran out into the street after a cat.

8. Lisa plays the piano. Her sister Kelly plays the piano, too.
   A. Lisa and her sister Kelly plays the piano.  
   B. Both Lisa and her sister Kelly play the piano. 
   C. Lisa plays the piano and Kelly plays the piano. 
   D. Lisa and Kelly too play the piano.
9. The road was slippery. We put chains on the tires.
   A. Although the road was slippery, we put chains on the tires.
   B. The road became slippery when we put chains on the tires.
   C. We put chains on the tires because the road was slippery.
   D. Putting chains on the tires, the road we were on was slippery.

10. Kazuko took her dog for a walk. They went to the park.
    A. Kazuko, going to the park, took her dog for a walk.
    B. Kazuko took her dog for a walk in the park.
    C. Kazuko took her dog for a walk because they went to the park.
    D. Kazuko and her dog went to the park, where they walked.
### Answer Key

#### SENTENCE SKILLS

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
</tr>
<tr>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>5</td>
<td>B</td>
</tr>
<tr>
<td>6</td>
<td>C</td>
</tr>
<tr>
<td>7</td>
<td>A</td>
</tr>
<tr>
<td>8</td>
<td>B</td>
</tr>
<tr>
<td>9</td>
<td>A</td>
</tr>
<tr>
<td>10</td>
<td>D</td>
</tr>
</tbody>
</table>

#### ARITHMETIC

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>B</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
</tr>
<tr>
<td>3</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>5</td>
<td>D</td>
</tr>
<tr>
<td>6</td>
<td>A</td>
</tr>
<tr>
<td>7</td>
<td>B</td>
</tr>
<tr>
<td>8</td>
<td>C</td>
</tr>
<tr>
<td>9</td>
<td>C</td>
</tr>
<tr>
<td>10</td>
<td>C</td>
</tr>
</tbody>
</table>

#### READING COMPREHENSION

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C</td>
</tr>
<tr>
<td>2</td>
<td>D</td>
</tr>
<tr>
<td>3</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>D</td>
</tr>
<tr>
<td>5</td>
<td>B</td>
</tr>
<tr>
<td>6</td>
<td>C</td>
</tr>
<tr>
<td>7</td>
<td>B</td>
</tr>
<tr>
<td>8</td>
<td>A</td>
</tr>
<tr>
<td>9</td>
<td>D</td>
</tr>
<tr>
<td>10</td>
<td>A</td>
</tr>
</tbody>
</table>

#### ELEMENTARY ALGEBRA

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>C</td>
</tr>
<tr>
<td>3</td>
<td>A</td>
</tr>
<tr>
<td>4</td>
<td>D</td>
</tr>
<tr>
<td>5</td>
<td>D</td>
</tr>
<tr>
<td>6</td>
<td>B</td>
</tr>
<tr>
<td>7</td>
<td>D</td>
</tr>
<tr>
<td>8</td>
<td>B</td>
</tr>
<tr>
<td>9</td>
<td>B</td>
</tr>
<tr>
<td>10</td>
<td>A</td>
</tr>
</tbody>
</table>
## Answer Key

### CLM (COLLEGE LEVEL MATH)

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C</td>
</tr>
<tr>
<td>2</td>
<td>E</td>
</tr>
<tr>
<td>3</td>
<td>E</td>
</tr>
<tr>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>5</td>
<td>A</td>
</tr>
<tr>
<td>6</td>
<td>E</td>
</tr>
<tr>
<td>7</td>
<td>C</td>
</tr>
<tr>
<td>8</td>
<td>B</td>
</tr>
<tr>
<td>9</td>
<td>A</td>
</tr>
<tr>
<td>10</td>
<td>D</td>
</tr>
</tbody>
</table>

### ESL SENTENCE MEANING

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
</tr>
<tr>
<td>3</td>
<td>A</td>
</tr>
<tr>
<td>4</td>
<td>A</td>
</tr>
<tr>
<td>5</td>
<td>D</td>
</tr>
<tr>
<td>6</td>
<td>D</td>
</tr>
<tr>
<td>7</td>
<td>B</td>
</tr>
<tr>
<td>8</td>
<td>C</td>
</tr>
<tr>
<td>9</td>
<td>D</td>
</tr>
<tr>
<td>10</td>
<td>A</td>
</tr>
</tbody>
</table>

### ESL READING SKILLS

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>D</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
</tr>
<tr>
<td>4</td>
<td>A</td>
</tr>
<tr>
<td>5</td>
<td>D</td>
</tr>
<tr>
<td>6</td>
<td>A</td>
</tr>
<tr>
<td>7</td>
<td>B</td>
</tr>
<tr>
<td>8</td>
<td>A</td>
</tr>
<tr>
<td>9</td>
<td>A</td>
</tr>
<tr>
<td>10</td>
<td>D</td>
</tr>
</tbody>
</table>

### ESL LANGUAGE USE

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
</tr>
<tr>
<td>3</td>
<td>D</td>
</tr>
<tr>
<td>4</td>
<td>D</td>
</tr>
<tr>
<td>5</td>
<td>B</td>
</tr>
<tr>
<td>6</td>
<td>D</td>
</tr>
<tr>
<td>7</td>
<td>C</td>
</tr>
<tr>
<td>8</td>
<td>B</td>
</tr>
<tr>
<td>9</td>
<td>C</td>
</tr>
<tr>
<td>10</td>
<td>B</td>
</tr>
</tbody>
</table>
Practice ACCUPLACER
Math Placement Test I
NO CALCULATOR ALLOWED

On the actual placement test, all questions are multiple choice, with five choices per question.

Elementary Algebra
This section has 12 questions.

1. If \( x = -2 \) and \( y = -3 \) what is the value \( \frac{x^2}{y - x} \)?

2. The total area of the rectangular floor below is \( \frac{5}{x} \).
The area of the black tile square is \( \frac{5}{x+1} \).
What is the area of the white tile section?
\( (x \neq 0, -1) \)

3. \((2x - 3)\) is a factor of which of the following.
   a. \( 2x^2 + 5x - 12 \)
   b. \( 2x^2 - 7x - 4 \)

4. What is the value of \( | -3 + 1 \frac{2}{3} | \)

5. If \(-2x + 7y = 90\) and \(5 \leq x \leq 11\), what is the least possible value for \( y \)?

6. If the quotient \( \frac{2m^2 + 8m}{m^2} \div \frac{16}{m^2 - 4m} \) is simplified to lowest terms, what is the denominator of the resulting expression.

7. \( \left( \frac{2}{x^5} \right)^{10} \)

8. \( \frac{36xy^2 - 42x^3y}{6xy} \)

9. Find the equation that represents the volume of a right circular cone whose radius is \( t \) and whose height is 4 times its radius. (Volume = \( \frac{1}{3} \pi r^2 h \), where \( r \) is the radius and \( h \) is the height).

10. \( \frac{2}{x} - \frac{5}{y} \)
   \( \frac{7}{x^2} - \frac{2}{y^2} \)

11. The length of a rectangle is 4 times its width. If the diagonal of the rectangle is 17, what is the width of the rectangle?

12. Tara made \( \frac{3m}{p} \) dollars working at McDonalds and Joe made \( \frac{6m - 4}{p} \) dollars. Lynn made \( 1 \frac{1}{3} \) as much as Tara. If they pool all their money, how much money will they have?
College Level Math

If a student gets at least 6/12 or 7/12 on the Elementary Algebra section of the test, they then take this test (CLM). This section has 20 questions. Note: that this test has many questions on rational expressions and equations (Chapter 6). Also, since this test is used for placement into Pre-Calculus and Calculus there are also 4 Trig questions. You do not need to get any of the Trig questions correct to place into College Level Math.

1. \((\sqrt{m} - 3\sqrt{p})(2\sqrt{m} + \sqrt{p})\)

2. \(-\frac{2}{6(x - 1)} - \frac{4}{x - 1}\)

3. The fundamental period of the function \(y = \tan\left(\frac{3\theta}{2}\right)\)

4. What is the equation of the line parallel to \(3x - 4y = 10\) and goes through the point \((5,-2)\)?

5. Get the equation of the line perpendicular to \(3x - 4y = 10\) and goes through the point \((5,-2)\).

6. \(f(x) = \tan(x)\) is positive in what quadrants?

7. If \(x < 0\), then \(|2x^3| - 3\) is equivalent to what expression that contains no absolute value signs?

8. In the \(xy\) plane, the point \((5,2)\) is on a circle centered at the origin, what is the radius of the circle?

9. If \(f(x) = 2x^2 - 1\) and \(g(x) = (2x^2 + 3)\), what is \(f(g(x))\)?

10. Where defined, \(\frac{1}{\sec(\theta)}\) is equal to what?

11. A line \(l\) goes through the points \((1,2)\) and \((3,4)\). If another line with a slope of -2 is drawn through the origin, it will intersect line \(l\) at the point \((t, p)\). What is the value of \(t - p\)?

12. If \(f(x) = \frac{2}{5x^2}\) and \(g(x) = 2x^2\), then what is \(g(f(x))\)?

13. What is the sum of the solutions to the equation \(|2x - 5| = 6\)?

14. Where defined, what does \((\frac{x^2 - 3x - 4}{x^2 - 9})(\frac{x + 3}{2x^2 - 3x - 2})\) equal?

15. In the figure below, what is the value of \(x\)?

16. Graph the function \(f(x) = 1 + \sec(x)\)

17. For \(x \neq 0\), \((3x)^{-1}(9x + (3x)^2) =\)

18. In an \(xy\) plane, point \(P\) has coordinates \((8,4)\) and point \(Q\) has coordinates \((23,7)\). If point \(X\) is on segment \(PQ\) so that the length of segment \(PX\) is twice the length of segment \(XQ\), what are the coordinates of point \(X\)?

19. If \(n^3\left(-\frac{1}{3}\right)^{n-1}\) is the \(n^{th}\) term of the sequence, then what is the fourth term of the sequence?

20. If \(f(x) = 6^{(2x-1)}\), what is \(f(2)\)?
Pre-Algebra

Used if a student gets less than 6/12 on the EA section.

1. Dave has a piece of material 20 inches long. He needs to cut it into pieces that are 2½ inches long. How many pieces that are 2½ inches long can Dave cut?

2. Mike makes 25,000 this year. If he gets a 5% raise, what will his salary be next year?

3. Tammy can walk 5 blocks in 32 minutes. At this rate how long will it take her to walk 35 blocks?

4. What does $\frac{5}{12} + \frac{3}{5}$ equal?

5. If the average of 7 numbers is 12, what is their sum?

6. What is $\frac{5}{12}$ expressed as a percent?

7. What is 35% of 20?

8. A train leaves at 3:42 and arrives at its destination at 6:15. How many minutes did it take the train to reach its destination?

9. What is $\frac{5}{12}$ of 60?

10. What does 1,000 x 1.34 = ?

11. What is 84 ÷ 0.03?

12. What does 813 - 189 =

13. What does $\frac{5}{12} - \frac{3}{15}$ equal?

14. The number 5.4 is equal to what simplified fraction?

15. Tom won some money in the lottery. If he spent $\frac{1}{5}$ of it on a boat and $\frac{1}{3}$ of it on a car, what fraction of the lottery money does he have left?

16. What whole number is closest to $\sqrt{27.9}$?

17. A bed is $7\frac{1}{4}$ feet long. The material to make the sheet for the bed is to be $1\frac{1}{4}$ times as long as the bed. How long does the sheet need to be?
Answers to Practice Placement Test I

Elementary Algebra

1. \[
\frac{-(-2)^2}{(3)-(-2)} = \frac{-4}{3+2} = \frac{-4}{5} = 4
\]

2. \[
\frac{5}{x} - \frac{5}{x+1} \quad \text{Get a common denominator and this}
\]
\[
gives us \frac{5(x+1) - 5x}{x(x+1)}. \quad \text{This simplifies to} \quad \frac{5x + 5 - 5x}{x(x+1)}
\]
\[
which equals \quad \frac{5}{x(x+1)}. 
\]

3. \[
2x^2 + 5x - 12 \quad \text{factors into} \quad (2x - 3)(x + 4)
\]
\[
2x^2 - 7x - 4 \quad \text{factors into} \quad (2x + 1)(x - 4).
\]

So \(2x - 3\) is only a factor of the first expression.

4. \[
\frac{4}{3}
\]

5. Try \(x = 5\) and \(x = 11\). If \(x = 5\) then \(y = \frac{100}{7} \).

If \(x = 11\), then \(x = \frac{112}{7} \). Therefore the least value of \(y\) is \(\frac{100}{7} \).

6. Flip, factor, and simplify. Flip the second expression and we get, \[
\frac{2m^2 + 8m}{m^2} \times \frac{m^2 - 4m}{16}.
\]

Now factor and we get, \[
\frac{2m(m + 4)}{m^2} \times \frac{m(m - 4)}{16}.
\]

Now simplify and we get, \[
\frac{(m + 4)(m - 4)}{8}.
\]

So the denominator is 8.

7. \[x^4\]

8. Factor and we get, \[
\frac{6xy(6y - 7x)}{6xy} \quad \text{This gives us} \quad (6y - 7x).
\]

9. \[
\frac{1}{3} \pi r^2 (4r). \quad \text{This gives us} \quad \frac{4}{3} \pi r^3
\]

10. \[
\frac{2y - 5x}{xy} \times \frac{x^2y^2}{7y^2 - 2x^2}, \quad \text{which simplifies to} \quad \frac{xy(2y - 5x)}{7y^2 - 2x^2}
\]

11. Use Pythagorean Theorem. \(x^2 + 16x^2 = 17^2\).

Simplify and we get, \(17x^2 = 17^2\). Divide by 17 to get \(x^2 = 17\). Take the square root to get, \(x = \sqrt{17}\).

12. \[
\frac{3m}{p} + \frac{6m - 4}{p} + \frac{4m}{p}
\]

Now simplify and we get, \[
\frac{13m - 4}{p}
\]

College Level Math

1. FOIL and we get, \[2m - 5\sqrt{mp} - 3p\]

2. \[
\frac{-2 - 4(6)}{6(x - 1)} \quad \text{Simplify and we get,} \quad \frac{-26}{6(x - 1)}, \quad \text{which equals} \quad \frac{-13}{3(x - 1)}
\]

3. \[
\frac{2\pi}{3}
\]

4. The slope of the line \(3x - 4y = 10\) is \(\frac{3}{4}\).

Now get the equation, \(y + 2 = \frac{3}{4}(x - 5)\).

Simplify and we get \(y = \frac{3}{4}x - \frac{23}{4}\)

5. The slope of the line \(3x - 4y = 10\) is \(\frac{3}{4}\).

Perpendicular lines have negative reciprocal slopes. So the slope of the line perpendicular would be \(-\frac{4}{3}\). Now get the equation.

\(y = -\frac{4}{3}(x - 5) - 2\). Simplify and we get \(y = -\frac{4}{3}x + \frac{14}{3}\)

6. Tan is positive in the 1st and 3rd quadrant.
7. \(-2x^5 - 3\)
8. \(5^2 + 2^2 = r^2\). So \(r = \sqrt{29}\)
9. \(f(g(x)) = 2(2x^2 + 3)^2 - 1\). Simplify and we get \(8x^4 + 24x^2 + 17\)
10. \(\cos(\theta)\)
11. First get the equation of the line that goes through \((1,2)\) and \((3,-4)\). The slope is \(\frac{-4 + 2}{3 - 1} = -1\). Now get the equation using the point–slope formula and we get \(y + 2 = -1(x - 1)\). Simplify and we get \(y = -x - 1\) is the equation of line \(l\). The other line has a slope of \(-2\) and goes through the origin so its equation is \(y = -2x\). Set the two equations equal to each other, and we get \(-x - 1 = -2x\). Solve and we get \(x = 1\) and \(y = -2\). So the point \((t, p)\) is \((1,2)\) so \(t - p\) is 3.
12. \(g(f(x)) = 2\left(\frac{2}{5x^2}\right)^2\) which simplifies to \(\frac{8}{25x^4}\)
13. Solve \(2x - 5 = 6\) and \(2x - 5 = -6\). We get the solutions \(x = \frac{11}{2}\) and \(x = -\frac{1}{2}\). Adding these we get 5.
14. Factor and simplify.\[
\frac{(x - 4)(x + 1)}{(x - 3)(x + 3)} \cdot \frac{x + 3}{(2x + 1)(x - 2)}
\]
This simplifies to \(\frac{(x - 4)(x + 1)}{(x - 3)(2x + 1)(x - 2)}\)
15. \(49 + 36 = y^2\), where \(y\) is the long side of the bottom triangle. We get \(y = \sqrt{85}\). Now \(85 + 64 = x^2\). So \(x = \sqrt{149}\).
16. \[
\begin{array}{c}
\text{Diagram}
\end{array}
\]
17. \(\frac{9x + 9x^2}{3x}\), which simplifies to \(\frac{9x(1 + x)}{3x}\), which simplifies to \(3 + 3x\).
18. \(x = \frac{2}{3}(23 - 8) + 8 \rightarrow 18\) and \(y = \frac{2}{3}(7 - 4) + 4 \rightarrow 6\).
So the point is \((18,6)\).
19. Substitute 4 in for \(n\) and we get \(4^3(\frac{1}{3})^3\), which equals \(\frac{64}{27}\)
20. Substitute 2 in for \(x\) and we get \(6^3\) which equals 216.

Pre Algebra

1. 8
2. 26,250
3. 7(32) = 224
4. 61 \(\frac{61}{60}\)
5. 7(12) = 84
6. 41.67%
7. 7
8. 153 minutes
9. 25
10. 1,340
11. 2,800
12. 624
13. \(\frac{13}{60}\)
14. \(\frac{52}{5}\)
15. \(\frac{7}{15}\)
16. 5
17. \(\frac{91}{16}\)
Elementary Algebra
This section has 12 questions.

1. If \( x = -3 \) and \( y = -4 \) what is the value \(-\frac{2y^3}{3y - 4x}\)?

2. The total area of the rectangular floor below is \( \frac{2}{x} \).
   The area of the black tile square is \( \frac{3}{2x + 5} \).
   What is the area of the white tile section?
   \((x \neq 0, -2.5)\)

3. \((2x - 1)\) is a factor of which of the following?
   a. \(6x^2 + x - 2\)
   b. \(2x^2 - 7x - 4\)
   c. \(20x^2 - 5\)

4. What is the value of \(\left| -1 + \frac{2}{3} - \frac{3}{2} \right|\)?

5. If \(-3x + 5y = 100\) and \(5 \leq x \leq 11\), what is the least possible value for \(y\)?

6. If the quotient \(\frac{\frac{3m^2 + 6m}{2m^2}}{\frac{9}{4m^2 - 8m}}\) is simplified to lowest terms, what is the denominator of the resulting expression?

7. \(\left(\frac{2}{x^3}\right)^9\)

8. \(\frac{60x^5y^2 - 42x^2y^3}{16xy^2}\)

9. What does the expression \(\frac{1}{3} \pi x^3 y\) simplify to when \(x = 2y^2\)?

10. \(\frac{\frac{2x}{3y} - \frac{1}{5}}{\frac{2}{3x^2} - \frac{5}{2y^2}}\)

11. The length of a rectangle is 5 times its width. If the diagonal of the rectangle is 26, what is the width of the rectangle?

12. Tara made \(\frac{8m}{p}\) dollars working at McDonalds and Joe made \(\frac{2m - 5}{p}\) dollars. Lynn made \(\frac{3}{4}\) as much as Tara. If they pool all their money, how much money will they have?
If a student gets at least 6/12 or 7/12 on the Elementary Algebra section of the test, they then take this test (CLM). This section has 20 questions. Note: that this test has many questions on rational expressions and equations (Chapter 6). Also, since this test is used for placement into Pre-Calculus and Calculus there are also 4 Trig questions. You do not need to get any of the Trig questions correct to place into College Level Math.

1. \((\sqrt{m} - \sqrt{p})(3\sqrt{m} + 5\sqrt{p})\)

2. \(-\frac{5}{5(x - 2)} - \frac{10}{x - 2}\)

3. The fundamental period of the function \(f(t) = \sin\left(\frac{3t}{2}\right)\)

4. What is the equation of the line parallel to \(-5x - 4y = 10\) and goes through the point \((7, -2)\)?

5. Write an equation of a line in standard form that has slope of \(-3\) and goes through the point \((1, -7)\).

6. Graph \(f(x) = 1 + \tan(x)\)

7. If \(x < 0\), then \(2x^2 - 3\) is equivalent to what expression that contains no absolute value signs?

8. In the \(xy\) plane, the point \((3, 2)\) is on a circle centered at the origin, what is the radius of the circle?

9. If \(f(x) = 4x^2 - 1\) and \(g(x) = (x^2 + 3)\), what is \(f(g(x))\)?

10. Where defined, \(\frac{1}{\cot(\theta)}\) is equal to what?

11. A line \(l\) goes through the points \((7, 3)\) and \((-3, -4)\). If another line with a slope of \(-3\) is drawn through the origin, it will intersect line \(l\) at the point \((t, p)\). What is the value of \(t - 2p\)?

12. If \(f(x) = \frac{2}{5x^2}\) and \(g(x) = 3x^2\), then what is \(f'(f(x))\)?

13. What is the sum of the solutions to the equation \(2x + 5 = 6\)?

14. Where defined, what does \(\frac{6x^2 - 23x - 4}{x^2 - 16} \div \frac{6x + 1}{2x^2 + 7x - 4}\) equal?

15. In the figure below, what is the value of \(x\)?

16. The equation \(4x^2 - 8x = -3\) has two solutions \(x_1\) and \(x_2\). If \(x_1 < x_2\), what does \(x_2\) equal in terms of \(x_1\)?

17. For \(x \neq 0\), \((4x)^{-1}(16x + (4x)^2) = \)

18. Graph the function \(f(x) = 2x^2 + 5\)

19. If \(n^2\left(-\frac{1}{2}\right)^{n-1}\) is the \(n\)th term of the sequence, then what is the fifth term of the sequence?

20. If \(f(x) = 5^{2x-1}\), what is \(f\left(\frac{1}{2}\right)\)?
Pre-Algebra

If a student gets less than 6/12 on the EA section, they then take the Pre-Algebra section of the test. This section contains 17 questions.

1. Dave has a piece of material 30 inches long. He needs to cut it into pieces that are 2½ inches long. How many pieces that are 2½ inches long can Dave cut?

2. Mike makes 28,000 this year. If he gets a 4% raise, what will his salary be next year?

3. Tammy can walk 4 blocks in 37 minutes. At this rate how long will it take her to walk 36 blocks?

4. What is \( \frac{5}{12} + \frac{5}{9} = \)?

5. If the average of 8 numbers is 52, what is their sum?

6. The number \( \frac{5}{7} \) is equal to what percent?

7. What is 45% of 60?

8. A train leaves at 1:52 and arrives at its destination at 3:12. How many minutes did it take the train to reach its destination?

9. What is \( \frac{5}{3} \) of 90?

10. What is 500 \( \times \) 2.74

11. What is \( 84 \div 0.02 \)

12. What is 925 - 379

13. What is \( \frac{5}{9} - \frac{3}{15} = \)

14. The number 7.02 is equal to what simplified fraction?

15. Tom won some money in the lottery. If he spent \( \frac{1}{3} \) of it on a boat and \( \frac{1}{6} \) of it on a car, what fraction of the lottery money does he have left?

16. What whole number is closest to \( \sqrt{38.9} \)?

17. A bed is 6\( \frac{1}{5} \) feet long. The material to make the sheet for the bed is to be 1\( \frac{1}{4} \) times as long as the bed. How long does the sheet need to be?
Answers to Practice Placement Test II

Elementary Algebra

1. \( \frac{128}{12 - 12} \rightarrow \frac{128}{0} \) which is undefined.

2. \( \frac{x + 10}{x(2x + 5)} \)

3. \((2x - 1)\) is a factor of “a” and “c”.

4. \( \frac{17}{6} \)

5. 23

6. \( \frac{2(m + 2)(m - 2)}{3} \)

7. \( x^6 \)

8. \( \frac{30x^4 - 21xy}{8} \)

9. \( \frac{8\pi y^4}{3} \)

10. \( \frac{xy(15y - 2x)}{4y^2 - 15x^2} \)

11. \( \sqrt{26} \)

12. \( \frac{16m - 5}{p} \)

College Level Math

1. \( 3m + 2\sqrt{mp} - 5p \)

2. \( \frac{-11}{x - 2} \)

3. \( \frac{4\pi}{3} \)

4. \( y = \frac{-5x + 27}{4} \)

5. \( 3x + y = -4 \)

6. Tan graph that goes through (0,1)

7. \( 2x^4 - 3 \)

8. \( \sqrt{13} \)

9. \( 4x^4 + 24x^2 + 35 \)

10. Tan(\( \theta \))

11. 8.35

12. \( \frac{5x^4}{2} \)

13. -5

14. \( 2x - 1 \)

15. \( \sqrt{106} \)

16. \( x_2 = 3x_1 \)

17. \( 4 + 4x \)

18. Parabola that goes through (0,5)

19. \( \frac{25}{16} \)

20. 1
Pre-Algebra

1. 12
2. $29,120
3. 5 hours and 33 minutes
4. $\frac{35}{36}$
5. 416
6. 71.43%
7. 27
8. 80 minutes
9. 150
10. 1,370
11. 4,200
12. 546
13. $\frac{16}{45}$
14. $7\frac{1}{50}$
15. $\frac{1}{2}$
16. 6
17. $7\frac{3}{4}$ feet
Elementary Algebra

1. What is the perimeter of the triangle?

(A) $10x + 3$
(B) $10x - 3$
(C) $30x - 72$
(D) $10x - 15$
(E) $10x - 7$

2. Which is equivalent to $-3t - 9 > 5t + 7$

(A) $t > -\frac{1}{2}$
(B) $t > \frac{1}{2}$
(C) $t > 2$
(D) $t < -2$
(E) $t > -2$
(F) $t < -\frac{1}{2}$

3. $(2x - 5y)^2 =$

(A) $4x^2 - 10xy + 25y^2$
(B) $4x^2 + 25y^2$
(C) $4x^2 - 7xy + 25y^2$
(D) $4x^2 - 14xy + 25y^2$
(E) $4x^2 - 20xy + 25y^2$

4. $(2x - 3)$ is a factor of which of the following:

I. $2x^2 + 5x - 12$
II. $2x^2 - 7x - 4$
III. $4x^2 + 9$

(A) Only I
(B) Only II
(C) Only III
(D) I and II
(E) I and III
(F) II and III

5. $\frac{p^{10}}{p^5} =$

(A) $\frac{1}{p^2}$
(B) $\frac{1}{p^{15}}$
(C) $p^{15}$
(D) $p^2$
(E) $p^5$
(F) $\frac{1}{p^5}$

6. The average value of a certain type of computer was $1,500 in 1994 and depreciated to $900 in 1999. Let $y$ be the average value of the computer in the year $x$, where $x = 0$ represents 1994. Write a linear equation that models the value of the computer in terms of the year $x$.

(A) $y = -600x + 1500$
(B) $y = -120x + 1500$
(C) $y = 20x + 1500$
(D) $y = -5x + 1500$
(E) $y = x + 1500$
7. \( \left( \frac{r}{4} \right) \left( \frac{1}{s} \right) \) is equivalent to \( \left( \frac{r}{4} \right) \) divided by

(A) \( \frac{1}{4s} \)
(B) \( \frac{1}{s} \)
(C) \( s \)
(D) \( 4s \)
(E) \( 4 \)

8. For a concert 200 tickets were sold for \( 2x \) dollars each, 300 tickets sold for \( 3x \) dollars each, and 400 tickets were sold for \( 4x \) dollars each. Which expression represents the total dollar amount from the sale of all 900 tickets?

(A) 900\( x \)
(B) 1200\( x \)
(C) 2000\( x \)
(D) 2900\( x \)
(E) 3600\( x \)

9. If both \( x \) and \( y \) are positive Integers in the equation \( x + 3y = 15 \), how many different values can \( x \) have?

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

10. Which of the following is equivalent to \( \sqrt{\frac{63x^2y^2}{7x^2y^2}} \)?

(A) \( 3x^2y^2 \)
(B) \( 3x^2y^2 \)
(C) \( 9x^2y^2 \)
(D) \( 3xy \sqrt{xy} \)
(E) \( 9x^2y^2 \)

11. The ordered pair \( (x, y) = (3, 4) \) is a solution to the equation \( kx - y = 16 \). What is the value of \( k ? \)

(A) \( \frac{20}{3} \)
(B) \( \frac{19}{4} \)
(C) 4
(D) 1
(E) \( \frac{1}{3} \)

12. \( \frac{2x}{3} - \frac{3y}{5} = \)

(A) \( \frac{10x - 9y}{15} \)
(B) \( \frac{2x - 3y}{8} \)
(C) \( \frac{2x - y}{5} \)
(D) \( \frac{10x - 9y}{2} \)
(E) \( \frac{2x}{15} - 5y \)

College Level Math

This section has 20 questions. Note: that this test has many questions on rational expressions and equations (Chapter 6). Also, since this test is used for placement into Pre-Calculus and Calculus there are also 4 Trig questions.

1. \( (5 + 2i)(6 - 3i) \)

(A) \( 6 - 3i \)
(B) \( 6 - 27i \)
(C) \( 16 - 3i \)
(D) \( 36 - 3i \)
(E) \( 36 - 27i \)
2. The fundamental period of the function \( f(x) = \tan(2x) \)
   (A) \( \frac{\pi}{4} \)
   (B) \( \pi \)
   (C) \( \frac{\pi}{2} \)
   (D) \( 2\pi \)
   (E) \( 4\pi \)

3. If \( x \neq 0 \), then \( |x^4| - 5 = \)
   (A) \( x^2 + 5 \)
   (B) \( x^2 - 5 \)
   (C) \( x^4 - 5 \)
   (D) \( x^4 + 5 \)
   (E) \( -x^4 + 5 \)

4. Which of the following is an equation of a line parallel to the line whose equation is \( y = 2x - 3 \)?
   (A) \( 3y + 2x = 3 \)
   (B) \( 3y + 3x = 1 \)
   (C) \( 6y - 12x = 5 \)
   (D) \( 4y - 2x = -3 \)
   (E) \( y - x = 3 \)

5. If \( f(x) = 3^{x-2} \) then \( f(1) = \)
   (A) -1
   (B) 0
   (C) \( \frac{1}{3} \)
   (D) 1
   (E) 3

6. A line goes through the origin with a slope of 2. Another line goes through the points (2,1) and (0,-4). These two lines will intersect at the point \((t, r)\). What is the value of \( t \)?
   (A) \( \frac{5}{2} \)
   (B) \( \frac{5}{2} \)
   (C) \( \frac{8}{9} \)
   (D) \( \frac{8}{9} \)
   (E) 8

7. The total area of the rectangular floor below is \( \frac{5}{x} \). The area of the black tile square is \( \frac{5}{x + 1} \).
What is the area of the white tile section? \((x \neq 0, -1)\)

(A) \( \frac{5}{x(x + 1)} \)
(B) \( \frac{10x + 5}{x(x + 1)} \)
(C) \( \frac{10}{x(x + 1)} \)
(D) \( \frac{25}{x(x + 1)} \)
(E) None of these
8. If \( 5^x = y \) and \( y^2 = z \), which of the following must be equal to \( z \)?
   (A) \( \sqrt{5^x} \)
   (B) \( 25^x \)
   (C) \( 25^{2x} \)
   (D) \( 5x^2 \)
   (E) \( 25x^2 \)

9. Which of the following are positive in the third quadrant?
   (A) Cot
   (B) Sin
   (C) Sec
   (D) Cos
   (E) None of these

10. In the \( xy \) plane, the point (2,2) is on a circle centered at the origin. What is the radius of the circle?
    (A) 2
    (B) 4
    (C) \( \sqrt{2} \)
    (D) \( 2\sqrt{2} \)
    (E) \( 2\sqrt{2} \)

11. If the roots of the equation \( x^2 + 12x = -32 \) are \( p \) and \( t \) and \( p < t \), then \( p = \)
    (A) \( 1 \)
    (B) \( t^2 \)
    (C) \( 2t \)
    (D) \( t \)
    (E) \( t + 6 \)

12. \( (\sqrt{x} + 2\sqrt{y})(\sqrt{x} - \sqrt{y}) \)
    (A) \( x - 2\sqrt{xy} - y \)
    (B) \( x - \sqrt{xy} - 2y \)
    (C) \( x - \sqrt{xy} + 2y \)
    (D) \( x + \sqrt{xy} - 2y \)
    (E) \( x + 2\sqrt{xy} + y \)

13. Where defined, \( \frac{(x - 3)(x + 5)^2}{x^2 - 34x^2 + 225} \)
    (A) \( -\frac{1}{x + 5} \)
    (B) \( \frac{1}{x - 5} \)
    (C) \( \frac{x + 5}{(x - 3)(x - 5)} \)
    (D) \( \frac{x + 5}{(x + 3)(x - 5)} \)
    (E) \( \frac{x - 5}{(x + 3)(x + 5)} \)

14. If \( \sin^{-1}(x) = \pi \), then \( x = \)
    (A) 1
    (B) -1
    (C) 0
    (D) \( \frac{\pi}{2} \)
    (E) None of these

15. If \( f(x) = x^2 + 2 \) for \( x > 0 \) and \( f^{-1}(x) \) is the inverse of \( f(x) \), then \( f^{-1}(4) = \)
    (A) \( -2 \)
    (B) 0
    (C) \( \sqrt{2} \)
    (D) 2
    (E) 4

16. The graph of the function \( f \) is symmetric about the \( x \) axis. If \( f(2) = 3 \), which of the following must be true?
    (A) \( f(-2) = 3 \)
    (B) \( f(2) = -3 \)
    (C) \( f(-2) = -3 \)
    (D) \( f(3) = -2 \)
    (E) \( f(3) = 2 \)
17. Simplify \( \frac{-5}{x - 2} - \frac{10}{(x^2 - 4)} \)

(A) \(-\frac{15}{x^2 - 4}\) 
(B) \(-\frac{5(x + 4)}{x^2 - 4}\) 
(C) \(-\frac{5x}{x^2 - 4}\) 
(D) \(-\frac{15}{x + 2}\) 
(E) \(-\frac{15}{x - 2}\)

18. If \(xyz \neq 0\), and \((-4x^3yz^2)^{\frac{3}{3}} P = 64x^{10}y^{12}z^{14}\), then \(P = \)?

(A) \(x^2y^{11}z^{12}\) 
(B) \(-64x^{9}y^{3}z^{6}\) 
(C) \(xy^9z^8\) 
(D) \(-xy^9z^8\) 
(E) \(2xy^3z^4\)

19. What are the solutions to the equation \(|3x - 7| = 6|\)

(A) \(\frac{13}{3}\) and \(-\frac{13}{3}\) 
(B) \(-\frac{13}{3}\) and \(\frac{1}{3}\) 
(C) \(\frac{1}{3}\) and \(-\frac{1}{3}\) 
(D) \(\frac{13}{3}\) and \(\frac{1}{3}\) 
(E) \(\frac{13}{3}\) and \(-\frac{1}{3}\) 
(F) Only \(\frac{13}{3}\)

20. Which of the following is the equation of the line that goes through the point (-1,2) and is parallel to the line? \(12x - 3y = -10\)

(A) \(y = -12x - 10\) 
(B) \(y = 4x - 2\) 
(C) \(y = -4x - 2\) 
(D) \(y = 4x + 2\) 
(E) \(y = 4x + 6\)
## Answer Key

### ELEMENTARY ALGEBRA

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>B</td>
</tr>
<tr>
<td>2</td>
<td>D</td>
</tr>
<tr>
<td>3</td>
<td>E</td>
</tr>
<tr>
<td>4</td>
<td>A</td>
</tr>
<tr>
<td>5</td>
<td>B</td>
</tr>
<tr>
<td>6</td>
<td>B</td>
</tr>
<tr>
<td>7</td>
<td>C</td>
</tr>
<tr>
<td>8</td>
<td>D</td>
</tr>
<tr>
<td>9</td>
<td>D</td>
</tr>
<tr>
<td>10</td>
<td>A</td>
</tr>
<tr>
<td>11</td>
<td>C</td>
</tr>
<tr>
<td>12</td>
<td>A</td>
</tr>
</tbody>
</table>

### COLLEGE LEVEL MATH

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>C</td>
</tr>
<tr>
<td>3</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>5</td>
<td>C</td>
</tr>
<tr>
<td>6</td>
<td>D</td>
</tr>
<tr>
<td>7</td>
<td>A</td>
</tr>
<tr>
<td>8</td>
<td>B</td>
</tr>
<tr>
<td>9</td>
<td>A</td>
</tr>
<tr>
<td>10</td>
<td>E</td>
</tr>
<tr>
<td>11</td>
<td>C</td>
</tr>
<tr>
<td>12</td>
<td>D</td>
</tr>
<tr>
<td>13</td>
<td>D</td>
</tr>
<tr>
<td>14</td>
<td>C</td>
</tr>
<tr>
<td>15</td>
<td>C</td>
</tr>
<tr>
<td>16</td>
<td>B</td>
</tr>
<tr>
<td>17</td>
<td>B</td>
</tr>
<tr>
<td>18</td>
<td>D</td>
</tr>
<tr>
<td>19</td>
<td>D</td>
</tr>
<tr>
<td>20</td>
<td>E</td>
</tr>
</tbody>
</table>
More Helpful ACCUPLACER Practice Sites

ACM Math Department Website
www.allegany.edu/math

Accuplacer Test Success
www.accuplacer-test.com

Practice Placement Test
www.testpreview.com

Practice Help for Mathematics
www.purplemath.com
www.math.com
www.mathtv.com

Practice Help for English/Reading
www.grammarbook.com