

# ACCUPLACER<sup>®</sup>

## SAMPLE QUESTIONS FOR STUDENTS

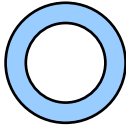
### MATH (Elementary Algebra)

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.
- A 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 the solution of equations, inequalities, word problems, solving linear equations and inequalities, the solution of quadratic equations by factoring, solving verbal problems presented in an algebraic context, including geometric reasoning and graphing, and the translation of written phrases into algebraic expressions.

*Solve the following problems and choose your answer from the alternatives 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?
  - 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.  $\pi R^2 - \pi(R - 3)^2$
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. If  $20 - \frac{4}{5}x \geq 16$ , then

- A.  $x \leq 5$
- B.  $x \geq 5$
- C.  $x \geq 32\frac{1}{2}$
- D.  $x \leq 32\frac{1}{2}$

**ADDITIONAL STUDY RESOURCES AVAILABLE  
AT THE WEBSITES BELOW:**

[www.freemathhelp.com](http://www.freemathhelp.com)

[www.algebrahelp.com](http://www.algebrahelp.com)

<http://www.actstudent.org/sampletest/index.html>

ELEMENTARY ALGEBRA	
QUESTION NUMBER	CORRECT ANSWER
1	D
2	C
3	A
4	D
5	D
6	B
7	D
8	B
9	B
10	A