About the Assessment

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Arithmetic Test – Description

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 Test Sample Questions

1. 2.75 + .003 + .158 =

   A. 4.36
   B. 2.911
   C. 0.436
   D. 2.938

2. 7.86 X 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 X 9.6
   A. 280
   B. 300
   C. 2,800
   D. 3,000

7. A soccer team played 160 games and won 65 per cent of them. How many games did to 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 1/2 of his time to the project and a second person for 1/3 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% 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. $1\frac{1}{15}$

Answers 1) B 2) A 3) C 4) C 5) D 6) A 7) B 8) C 9) C 10) C May 2005

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Elementary Algebra Test– Description

A total of 12 questions of 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.

Elementary Algebra Test Sample Questions

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. $\sqrt{2} \cdot \sqrt{15}$ = ?

   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?

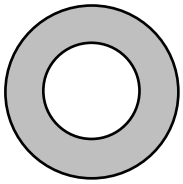
   A. -80

   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. πR^2

B. $\pi (R - 3)^2$

C. $\pi R^2 - \pi \cdot 3^2$

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. $\dfrac{x^2 - x - 6}{x^2 - 4} =$

A. $\dfrac{x - 3}{2}$

B. $\dfrac{x - 3}{x - 2}$

C. $\dfrac{x - 3}{x + 2}$

D. $\dfrac{3}{2}$

7. $\dfrac{4 - (-6)}{-5} =$

A. $\dfrac{2}{5}$

B. $-\dfrac{2}{5}$

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 $20 - \dfrac{4}{5}x \geq 16$, then

A. $X \leq 5$
B. $X \geq 5$
C. $X \geq 32½$
D. $X \leq 32½$

Answers 1) D 2) C 3) A 4) D 5) D 6) B 7) D 8) B 9) B 10) A

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