SKILLS LIST and SAMPLE TEST ITEMS

FOR

PRACTICE TEST FOR ALGEBRA, END OF COURSE EXAM

(Test items developed for skills measured in ACTAAP*)

Skills

1.0 Language of Algebra
- 1.1 Real Number System
- 1.2 Fundamental Language of Algebra
- 1.3 Order of Operations
- 1.4 Variables
- 1.5 Symbolic Expressions
- 1.6 Expression/Equation/Simplify/Solve
- 1.7 Illustrate Numerically

2.0 Equations and Inequalities
- 2.1 Solve Equations
- 2.2 Solve Simple Inequalities
- 2.3 Estimation/Appropriate Units/Sentence Form
- 2.4 Integrate Algebra and Geometry

3.0 Graphs and Tables
- 3.1 Interpret Graphs and Tables
- 3.2 Use Matrix
- 3.3 Linear Functions
- 3.4 Measures of Central Tendency

4.0 Functions/Relations/Patterns
- 4.1 Domain and Range of a Relation
- 4.2 Relation/Function
- 4.3 Independent and Dependent Variables
- 4.4 Real-World Problems

5.0 Polynomial Operations
- 5.1 Add/Subtract/Multiply
- 5.2 Factor Simple Expressions
- 5.3 Second Degree Equations
- 5.4 Scientific Notation

Number of questions: 60
Number of pages: 9

(OVER)

ACTAAP PRACTICE TEST IN ALGEBRA - END OF COURSE EXAM

1. Simplify the following.

$$\frac{100(2-4)}{1000/10/10}$$

A. 60
B. 20
C. -20
D. .00196

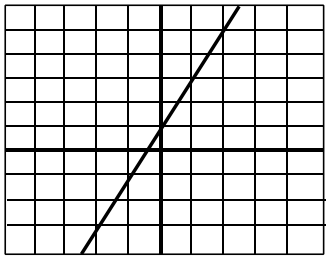
2. Tickets to the school play cost $5 each with a $2 service fee per order. About how many tickets can be bought with a twenty dollar bill?

A. 2
B. 5
C. 4
D. 7

3. Which of the following statements describes the line with an undefined slope?

A. the line is vertical
B. the line is horizontal
C. the slope cannot be computed because of missing information
D. the slope is inclined in an upward right direction

4. The graph shown below is the graph of the equation y = 2x + 1. What is the domain of the function represented?



A. $\{\frac{x}{x} < 1\}$

B. $\{\frac{x}{x} > 1\}$

C. $\{\frac{y}{x} > \frac{1}{2}\}$

D. all real numbers

5. Write the following number in standard notation:

$$3.4 \times 10^5$$

A. 340,000
B. 0.000034
C. 3,400,000
D. 34 x 10000

6. Which of the following is *not* correct?

A. x(z + y) = xz + xy
B. x(z + y) = (y + z)x
C. x + (z + y) = (x + z) + y
D. x(z + y) = zy + x

7. Solve the following equation for x:

$$\frac{x-1}{3} = \frac{x+2}{6} + 2$$

A. 16
B. 26
C. 3
D. $\frac{24}{9}$

8. Which of the following points is *not* a solution to the following equation?

$$Y = 3x + 4$$

A. (-3,-5)
B. (0,4)
C. (2,9)
D. (6,22)

9. Aaron has saved $330 to buy a stereo and some CD's. The stereo costs $175, and the CD's are $8.50 each. How many CD's can Aaron purchase with his stereo?

A. 18
B. 19
C. 21
D. 85