LEVEL III
INTERMEDIATE ALGEBRA TEST
TYPICAL QUESTIONS FROM COMPETENCY AREAS

Elementary Numeric and Algebraic Operations

$\frac{c}{d} + 2 =$

(A) $\frac{c+2d}{d}$ (B) $\frac{c+2}{d+2}$ (C) $\frac{c+2}{d}$ (D) c+2d (E) c

Rational Expressions

$\frac{c-d}{\frac{1}{d}-\frac{1}{c}} =$

(A) $\frac{c-d}{dc}$ (B) $\frac{dc}{c-d}$ (C) dc (D) –dc (E) $\frac{1}{dc}$

Exponents and Radicals

$\sqrt{3} + \sqrt{27} =$

(A) 6 (B) $3\sqrt{3}$ (C) $4\sqrt{3}$ (D) $10\sqrt{3}$ (E) $\sqrt{30}$

Linear Equations; Inequalities, Absolute Value

If 3x + 2y = 8 and y = x – 1, then x =

(A) – 6 (B) $\frac{6}{5}$ (C) $\frac{7}{5}$ (D) $\frac{9}{5}$ (E) 2

Polynomials; Quadratic equations

One of the roots of (x – 2) (3x + 4) = 0 is:

(A)– 2 (B) $-\frac{4}{3}$ (C) $-\frac{3}{4}$ (D) $\frac{3}{4}$ (E) $\frac{4}{3}$

The Coordinate Plane and Graphing

Which of the following is an equation of a line with slope 3 and y-intercept – 4?

(A)y= $\frac{1}{3}x-4$ (B)y = 3x – 4 (C) y = 3x + 4

(D) y = 4x – 3 (E) y = 4x + 3

Functions and Logarithms

If $\log_{10} x + \log_{10} y = 3$, then xy =

(A) 0.001 (B)1.0 (C) 10 (D) 100 (E) 1000

Word Problems

A student who correctly answered 72 questions on a test received a score of 75%. How many questions were on the test?

(A) 54 (B) 72 (C) 75 (D) 96 (E) 104

Answer key: (1) A (2) C (3) C (4) E (5) B (6) B (7) E (8) D