LEVEL 3   INTERMEDIATE ALGEBRA TEST
TYPICAL QUESTIONS FROM COMPETENCY AREAS

Elementary Numeric and Algebraic Operations

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

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

Rational Expressions

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

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

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) $\dfrac{6}{5}$ (C) $\dfrac{7}{5}$ (D) $\dfrac{9}{5}$ (E) 2

Polynomials; Quadratic Equations

One of the roots of $(x-2)(3x+4) = 0$ is

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

The Coordinate Plane and Graphing

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

     (A) $y = \dfrac{1}{3}x - 4$ (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

Answers: 1. A   2. C   3. C   4. E   5. B   6. B   7. E   8. D