This test will assess your elementary algebra skills for placement into INTERMEDIATE ALGEBRA (Math 107) or INTERMEDIATE ALGEBRA (Math 111). Eligibility for these courses will be based on scores achieved on the 45-minute, 50-item test.

**PLEASE NOTE:** CALCULATORS ARE NOT ALLOWED AT ASSESSMENT TESTING. IT IS BEST TO STUDY WITHOUT THE AID OF A CALCULATOR.

**Elementary numerical operations**

1. \( \frac{c}{d} + 2 = \)
   
   (A) \( \frac{c + 2d}{d} \)  
   
   (B) \( \frac{c + 2}{d + 2} \)  
   
   (C) \( \frac{c + 2}{d} \)  
   
   (D) \( c + 2d \)

**Polynomials**

2. \( (x^3 + 3y)(2x^3 + 3y) = \)
   
   (A) \( 2x^6 + 9y^2 \)  
   
   (B) \( 2x^9 + 9x^3y + 9y \)  
   
   (C) \( 20x^9y^2 \)  
   
   (D) \( 2x^6 + 9x^3y + 9y^2 \)

**Linear equations and inequalities**

3. If \( 3x + 2y = 8 \) and \( y = x - 1 \), then \( x = \)
   
   (A) \( -6 \)  
   
   (B) \( -\frac{4}{3} \)  
   
   (C) \( \frac{3}{4} \)  
   
   (D) \( 2 \)

4. The inequality \( 7 - 2x < 1 \) is equivalent to
   
   (A) \( x < 3 \)  
   
   (B) \( x < -4 \)  
   
   (C) \( x > 3 \)  
   
   (D) \( x > -4 \)

**Quadratic equations**

5. One solution of \( x^2 - 4x = 12 \) is
   
   (A) \( 2 \)  
   
   (B) \( 6 \)  
   
   (C) \( 12 \)  
   
   (D) \( 16 \)

**Graphing**

6. An equation of the line on the drawing is
   
   (A) \( y = \frac{1}{2}x + 1 \)  
   
   (B) \( y = 2x + 1 \)  
   
   (C) \( y = x + 2 \)  
   
   (D) \( y = \frac{1}{2}x + 1 \)

**Rational expressions**

7. \( \frac{1}{x} + \frac{2}{x+1} = \)
   
   (A) \( \frac{3}{2x+1} \)  
   
   (B) \( \frac{x+3}{x(x+1)} \)  
   
   (C) \( \frac{3x+1}{x(x+1)} \)  
   
   (D) \( \frac{4}{x+1} \)

**Exponents and roots**

8. \( \sqrt{3} + \sqrt{27} = \)
   
   (A) \( 6 \)  
   
   (B) \( 3\sqrt{3} \)  
   
   (C) \( 4\sqrt{3} \)  
   
   (D) \( \sqrt{30} \)

**Geometric measurement**

9. In the triangle at the right, \( x = \)
   
   (A) \( 2a \)  
   
   (B) \( \sqrt{34a} \)  
   
   (C) \( 16a^2 \)  
   
   (D) \( 4a \)

**Word problems**

10. 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) \( 75 \)  
    
    (C) \( 96 \)  
    
    (D) \( 104 \)

**ANSWERS:** (1) A  (2) D  (3) D  (4) C  (5) B  (6) A  (7) C  (8) C  (9) D  (10) C