The **Elementary Algebra** (Yellow cover) test will assess: Elementary Algebra (Math 100), Elementary Geometry (Math 112), Intermediate Algebra (Math 120) and Intermediate Algebra with Applications (Math 125). This is a 45 minute 50 question readiness assessment. Calculators are not allowed.

### 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) \(20x^2y^2\)
   - (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 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