

ELEMENTARY ALGEBRA SAMPLE QUESTIONS

The **ELEMENTARY ALGEBRA** (Yellow cover) test will assess: Elementary Algebra (Math100), 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) $20x^9y^2$ (D) $2x^6 + 9x^3y + 9y^2$

Linear equations and inequalities

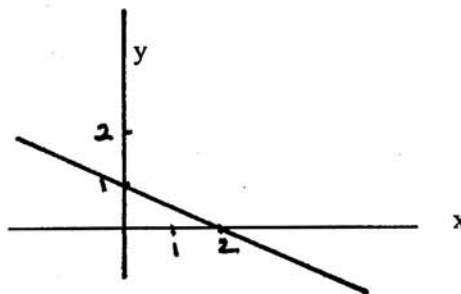
3. If $3x + 2y = 8$ and $y = x - 1$, then $x =$
 (A) -6 (B) $-\frac{4}{3}$ (C) $-\frac{3}{4}$ (D) 2
4. The inequality $7 - 2x < 1$ is equivalent to
 (A) $x < 3$ (B) $x < -4$ (C) $x > 3$ (D) $x > -4$

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

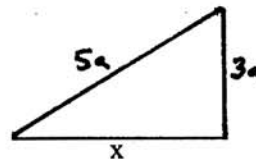
7. $\frac{1}{x} + \frac{2}{x+1} =$
 (A) $\frac{3}{2x+1}$ (B) $\frac{x+3}{x(x+1)}$ (C) $\frac{3x+1}{x(x+1)}$ (D) $\frac{4}{x+1}$

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 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