

**SANTA BARBARA CITY COLLEGE**  
**TEST #2 – SAMPLE QUESTIONS**

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.

*More extensive study packets are available in the Campus Bookstore.*

**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

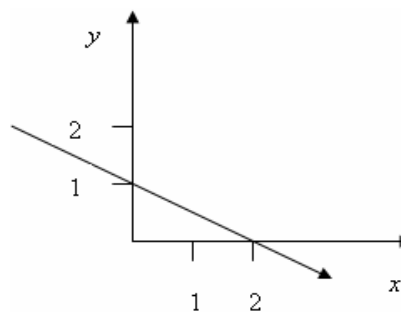
5. One solution of  $x^2 - 4x = 12$  is

- (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

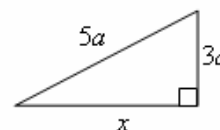
8.  $\sqrt{3} + \sqrt{27} =$

- (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