

INTERMEDIATE ALGEBRA – MATH ANALYSIS SAMPLE QUESTIONS

The **INTERMEDIATE ALGEBRA** (Green cover) test will assess: Intermediate Algebra (Math 120), Math Ideas (Math 300), Calculus for Business & Economics (Math 341), Modern Business Math (Math 343), Finite Math (Math 344) and Statistics (Statistics300). This is a 45 minute 45 question readiness assessment.

The **MATH ANALYSIS** (Gold Cover) test will assess: Math Discovery (Math 310) and Trigonometry with College Algebra (math 335). **Calculators are not allowed.**

Elementary operations

1. $2x - 3 [2x - (3 - 4x)] =$ (A) $8x - 9$ (B) $-8x + 3$ (C) $9 - 16x$ (D) $12x^2 - 24x + 9$

Rational expressions

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

Exponents and radicals

3. $\frac{x^{6a} x^2}{x^{2a}} =$ (A) x^5 (B) x^{4a+2} (C) x^6 (D) x^{10a}

4. $\sqrt[3]{4} \sqrt[3]{12} =$ (A) $4\sqrt[3]{3}$ (B) $2\sqrt[3]{6}$ (C) $\sqrt[3]{48}$ (D) $2\sqrt[3]{2}$

Linear equations and inequalities

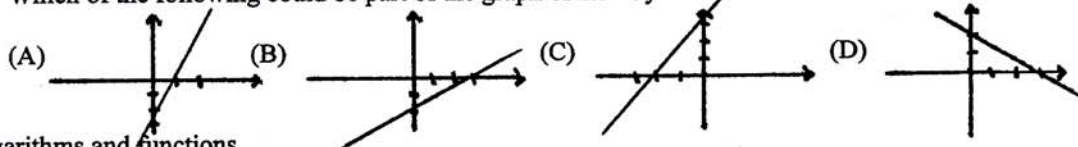
5. If $2x + y = 8$
 $x - y = 1$, then $y =$ (A) 3 (B) 5 (C) 2 (D) There are no solutions for y .

Quadratic polynomials, equations, and inequalities

6. The solutions to $y^2 - 2y + 3 = 0$ are:
(A) $1 \pm \sqrt{2}i$ (B) 3 and -1 (C) $\pm 2\sqrt{2}i$ (D) $1 \pm 2\sqrt{2}$

Graphing and the coordinate plane

7. Which of the following could be part of the graph of $2x - 3y = 6$



Logarithms and functions

8. If $f(x) = \frac{x^2 + 5}{x - 1}$, then $f(-3) =$ (A) $-\frac{7}{2}$ (B) 1 (C) -7 (D) $\frac{14}{3}$

9. If $\log_2(x) = 3$, then $x =$ (A) $\sqrt[3]{2}$ (B) 6 (C) 8 (D) 9

Word problems

10. If $\frac{2}{3}$ is $\frac{1}{2}$ of $\frac{4}{5}$ of a certain number, then that number is (A) $\frac{15}{4}$ (B) $\frac{5}{3}$ (C) $\frac{5}{6}$ (D) $\frac{5}{12}$