COLLEGE OF THE SEQUOIAS
ADMISSIONS & ASSESSMENT
PROCEDURES

1) Submit your Application for Admission:

Visit www.cos.edu and click on the New and Returning Students link, from there you can start the online application. Submit the online application and print a copy of the confirmation page for you records. Follow each step on the Registration Checklist accordingly.

2) Take the placement test:

A) If you want to take the placement test at your high school, make sure you contact your high school counselor or career technician and provide them with your full name, social security number, and math test you will be taking (you must choose one of four math levels - see attached information for test selection).

B) If you want to take the placement test at the college go to room 157 anytime between 8:15am and 2:30pm Monday through Friday. No appointment necessary. If you have any questions check out the Assessment link on www.cos.edu or call us at the Assessment office.

Don’t forget to bring a valid picture i.d. with you.

NOTE: If you plan on taking the test on the same day you complete your application, you will need to bring a copy of the confirmation printout with you.
6. A certain number is 7 less than the sum of two numbers. If you are twice as much as one of the numbers, how much is each number?

\[ \text{Let the numbers be } x \text{ and } y. \]

\[ x = y + 7 \]

\[ 2x = y \]

Solving these equations, we find:

\[ x = 14, \quad y = 7 \]

7. If we have a certain number of apples and we give away 3 apples, how many apples do we have left?

Let the number of apples be \( a \).

\[ a - 3 \]

8. If the sum of two numbers is 10 and their product is 21, what are the numbers?

Let the numbers be \( x \) and \( y \).

\[ x + y = 10 \]

\[ xy = 21 \]

Solving these equations, we find:

\[ x = 7, \quad y = 3 \quad \text{or} \quad x = 3, \quad y = 7 \]

9. If the product of two numbers is 60 and their sum is 11, what are the numbers?

Let the numbers be \( x \) and \( y \).

\[ xy = 60 \]

\[ x + y = 11 \]

Solving these equations, we find:

\[ x = 6, \quad y = 5 \quad \text{or} \quad x = 5, \quad y = 6 \]

10. If the difference of two numbers is 5 and their product is 56, what are the numbers?

Let the numbers be \( x \) and \( y \).

\[ x - y = 5 \]

\[ xy = 56 \]

Solving these equations, we find:

\[ x = 8, \quad y = 3 \quad \text{or} \quad x = 7, \quad y = 8 \]

Example Questions for the Aptitude Entrance Test

1. A certain number is 7 less than the sum of two numbers. If you are twice as much as one of the numbers, how much is each number?

2. If we have a certain number of apples and we give away 3 apples, how many apples do we have left?

3. If the sum of two numbers is 10 and their product is 21, what are the numbers?

4. If the product of two numbers is 60 and their sum is 11, what are the numbers?

5. If the difference of two numbers is 5 and their product is 56, what are the numbers?
SAMPLE QUESTIONS FOR THE INTERMEDIATE ALGEBRA DIAGNOSTIC TEST

1. Simplifying variable expressions
   \[
   \frac{x^2 + 3x}{x^2 - 5x + 9} =
   \]
   a) \(-x^2 + 12x - 18\)  b) \(-x^2 - 7x - 18\)  c) \(x^2 - 13x + 18\)
   d) \(x^2 - 13x - 18\)  e) \(-x^2 + 7x - 18\)

2. Expressions
   \[
   \frac{x^2 - 4}{x + 5} \times \frac{x^2 - 4x - 5}{x - 2} =
   \]
   a) \(x + 2\)  b) \(x^4\)  c) \(x^2 + x - 2\)  d) \(x^2 - x + 2\)
   e) \(\frac{x - 1}{x + 2}\)

3. Linear equations and inequalities
   For what value of \(t\) does \(\frac{2t - 1}{3t + 4} = 2\)?
   a) \(-6\)  b) \(-9/4\)  c) \(3/2\)  d) \(2/4\)
   e) No value of \(t\) satisfies this equation.

4. Polynomials and polynomial equations—primary quadratic
   If \((x - 1)(x^2 - 4) + 2(x - 1)(x + 2) = (x - 1)p\), then \(p = \)
   a) \(x^2 - 2\)  b) \(x^2\)  c) \((x + 2)\)  d) \(x^2 + 2\)
   e) \((x - 1)^2\)

5. Functions
   If \(f(x) = 2x + 5\) and \(g(x) = 1 - x^2\), then \(f(g(2)) = \)
   a) \(-3\)  b) \(-1\)  c) \(1\)  d) \(2\)
   e) 9

6. Trigonometry
   If \(\sin \theta = \frac{3}{5}\) and \(0 \leq \theta \leq \frac{\pi}{2}\), then \(\tan \theta = \)
   a) \(3/2\)  b) \(4/3\)  c) \(5/4\)  d) \(4/5\)
   e) \(3/4\)

7. Logarithmic and exponential functions
   \[
   \log_3 27 =
   \]
   a) \(8\)  b) \(9\)  c) \(3\)  d) \(1/3\)  e) \(1/9\)

8. Mathematical modeling—word problems
   If \(2/p^2\) is 1/2 of 4/5 of a certain number, then that number \(x\) \(
   a) \(15/4\)  b) \(5/3\)  c) \(5/6\)  d) \(5/12\)
   e) \(4/15\)

*Answers to questions can be found on page 8*