Mt. San Antonio College
Assessment Center
Student Services Center
909-274-4265

For more information on the placement test, please go to http://www.mtsac.edu/assessment/testinfo.html

Level 2

Intermediate Algebra Placement Test

For placement into:

Math 61 - Plane Geometry
Math 71 - Intermediate Algebra
Math 71A - Intermediate Algebra – First Half
Math 71X - Practical Intermediate Algebra

Mt. San Antonio College Mathematics Department wishes that you have a pleasant experience and success with your classes at Mt. SAC, in particular those offered by the Math Department.

The material in the Intermediate Algebra Placement Test is generally covered in the typical first course in Algebra. The topic areas are:

| I.  Arithmetic Operations, including Signed Numbers, Fractions, Decimals & Percents | V.  Graphing |
| II. Polynomials, including their Operations & Factoring | VI. Rational Expressions and their Operations |
| III. Linear Equations and Inequalities | VII. Exponents and Square Roots |
| IV. Quadratic Equations | VIII. Geometric Measurement, including Areas, Perimeters, Circumference, and the Pythagorean Theorem |

If you wish to consult a reference prior to taking the placement test, you might consult the current Math 51 textbook, available at the Mt. SAC bookstore for purchase, or any elementary algebra textbook.

The test is 45 minutes long and consists of 50 questions. Calculators are NOT permitted. Your score will be used to help determine your placement according to the following:

<table>
<thead>
<tr>
<th>SCORES</th>
<th>Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 24</td>
<td>You most likely will not be successful in Math 61 / Math 71. Please take the Mt. SAC MATH PLACEMENT TEST to determine the appropriate placement into LERN 48 / LERN 49 / Math 50 / Math 51 / Math 70S.</td>
</tr>
<tr>
<td>25 - 50</td>
<td>Math 61, Math 71, Math 71A, Math 71X</td>
</tr>
</tbody>
</table>

A SAMPLE OF 10 QUESTIONS CAN BE FOUND ON THE BACK OF THIS PAGE
The following set of 10 questions is a sample, whose sole purpose is to inform you of the format and level of expertise required for the Intermediate Algebra Placement Test. This sample is much shorter than the test and does NOT represent all of the topics mentioned on the other side of this page. BEING ABLE TO CORRECTLY ANSWER THESE QUESTIONS DOES NOT NECESSARILY GUARANTEE SUCCESS ON THE TEST.

1. \(\frac{2}{3} \div \frac{3}{4} + \frac{5}{6} = ?\)
   a. \(\frac{4}{13}\)
   b. \(\frac{6}{13}\)
   c. \(\frac{3}{4}\)
   d. \(-\frac{11}{12}\)
   e. \(\frac{4}{5}\)

2. \(\sqrt{72} - \sqrt{18} = ?\)
   a. \(3\sqrt{6}\)
   b. \(3\sqrt{2}\)
   c. 3
   d. \(3\sqrt{10}\)
   e. \(9\sqrt{2}\)

3. If \(x = 5\) and \(y = 3\), then \(\frac{4x - y^2}{xy - 7} = ?\)
   a. \(-\frac{29}{22}\)
   b. \(-\frac{29}{8}\)
   c. \(\frac{11}{8}\)
   d. \(-\frac{7}{11}\)
   e. \(-\frac{1}{2}\)

4. In rectangle \(ABCD\) below, \(AB = 12\) and \(AD = 7\), with square \(BCEF\). What is the area of triangle \(AFE\)?
   a. 42
   b. 24.5
   c. 84
   d. 17.5
   e. 38

5. \(\frac{3}{2x} + \frac{x}{2x - 6} = ?\)
   a. \(\frac{3x}{4x - 6}\)
   b. \(\frac{x + 3}{4x - 6}\)
   c. \(\frac{3}{2x - 4}\)
   d. \(x^2 + 3x - 9\)
   e. \(\frac{x^2 + 3x - 9}{2x^2 - 6x}\)

6. The point \((-3, -3)\) is on the graph of \(5x - y = 3x - 5\).
   a. \((-1, -3)\)
   b. \((5, -3)\)
   c. \((29, -3)\)
   d. \((-4, -3)\)
   e. \((-\frac{8}{5}, -3)\)

7. If \(3x + y = 9\) and \(x = y + 11\), then \(y = ?\)
   a. 5
   b. 6
   c. -6
   d. -1
   e. -12

8. \(\frac{x^4 y^9}{xy^3} = ?\)
   a. \(x^4y^6\)
   b. \(x^3y^6\)
   c. \(x^3y^{12}\)
   d. \(x^4y^{12}\)
   e. \(x^4y^{-3}\)

9. \(2x - 5)(3x + 2) - (x^2 - 3x - 8) = ?\)
   a. \(5x^2 - 14x - 18\)
   b. \(5x^2 - 8x - 2\)
   c. \(5x^2 - x - 18\)
   d. \(5x^2 + 3x - 2\)
   e. \(5x^4 - 8x^2 - 2\)

10. One of the solutions of the equation \(3x^2 - 2x - 8 = 0\) is?
    a. \(-\frac{4}{3}\)
    b. -2
    c. \(\frac{2}{3}\)
    d. \(\frac{4}{3}\)
    e. -4


Additional sample test questions are available at [http://www.mtsac.edu/assessment/testinfo.html](http://www.mtsac.edu/assessment/testinfo.html)