



## **Maaref Mathematics Placement Test - MMPT Brief Basic Info & Sample Questions for Students**

### **Basic Info**

#### ***Overview***

The MMPT is a timed, computerized multiple choice test given to all MU prospective students. There is one type of MMPT available: open to all majors.

#### ***Structure***

The standard MMPT is composed of one section.

### **Maaref Mathematics Placement Tests (MMPT)**

The Mathematics Placement Test is required from all applicants according to the following criteria:

- The Mathematics Level I Placement Test is required from all candidates following the Arts and Business majors.

### **The syllabus of the Mathematics Level I Placement test (one hour) covers the following:**

1. Fractions and their properties
2. Parallel and perpendicular lines and their properties
3. First degree equations and word problems involving one or two unknowns
4. Properties of multiplication and addition: commutative, associative, and distributive laws
5. Evaluating expressions
6. Triangles: length of sides and measures of angles
7. Averages and percentages

8. Areas and perimeters of triangles, squares, rectangles, and trapezoids

All candidates are required to enter the placement exam hall with the items shown in Table 1 below:

Table 1 Necessary stationary items for the test

|   |
|---|
| <ol style="list-style-type: none"><li>1. A payment voucher</li><li>2. Calculator</li><li>3. Two Sharpened pencils (H-2)</li><li>4. Pen with blue ink</li><li>5. Identification card</li></ol> |
|---|

Candidates are placed in the appropriate levels of mathematics courses according to their scores as shown in Table 2 below:

Table 2 Distribution of candidates according to test scores and course levels

| <b>Mathematics Placement Test</b> | <b>Department/Major</b>  | <b>Test Scores, %</b> | <b>Placement</b>        |
|-----------------------------------|--|-----------------------|-------------------------|
| Mathematics Level I               | • Mass Communication & Fine Arts<br>• Religions and Human Sciences | Zero – 49             | MAT 200 – Basic Algebra |
|                                   |  | 50 – 100              | Exempted                |
|                                   | • Business Administration  | Zero – 49             | MAT 200 – Basic Algebra |
|                                   |  | 50 – 100              | MAT 210 – Business Math |

**SAT I and SAT II Math Tests and their MU Equivalents**

Applicants who sit for the SAT I Math test or for the SAT II Math test will be placed in the appropriate Mathematics courses at MU, based on their scores in these tests as shown in the following Table 3:

Table 3 Scores equivalencies

| SAT I  | Score         | MU Mathematics Test Equivalents |
|--------|---------------|---------------------------------|
| Math I | 400 – 525     | MAT 200 – Basic Algebra         |
| Math I | 526 and Above | MAT 210 – Business Math         |
|        |               |                                 |

***Length***

The total time allocated for the MMPT is 1 hour.

***Scores***

The highest scores achievable for MMPT is 100. For information on the correlation between scores and Mathematics courses, please check Table 2.

***Testing Policies***

a) Eligibility & Application

Prior to enrolling in any academic semester at MU, any/all prospective students are required to complete the MMPT (except for Translation and Languages major).

- New Students

Sitting for the MMPT is mandatory for all first-time MU students (except for Translation and Languages major).

- Transfer Students

Decision is made by the school council concerned on a case-by-case basis.

b) Results

- Publication of Results

MMPT results are published within 4 working days from the date the test was administered. Working days do not include Sundays and official holidays.

- Interpretation of Results

The interpretation of results highlights the correlation between the MMPT scores and the Mathematics courses. Based on their results, prospective students will be placed either into the MAT 200 or MAT 210.

- Applicants, majoring in Business Administration, Mass Communication & Fine Arts, and Religions and Human Sciences who score between 0 and 49 (out of 100) on the MMPT will be placed into the Basic Algebra course which extends over a period of one semester or 15 weeks (One full semester).

Applicants majoring in Mass Communication & Fine Arts, and Religions and Human Sciences who score 50 and above (out of 100) on the MMPT will be exempted from MAT 200. While, applicants majoring in Business Administration who score 50 and above (out of 100) on the MMPT will be placed in Mat 210 (Business Math) course.

- Expiration of Results

All assessment results are valid for a period of *one calendar year* (starting September 1 and ending September 30). Students must make sure to enroll in the courses their assessment results qualified them for before their assessment results expire. Once the results have expired, students will be blocked from enrolling in those courses and will need to retest.

c) Exemption

Students may be waived from assessment in case they meet any of the exemptions listed below.

- Transfer Students

Decision on the issuance of placement waivers is made by the school council concerned on a case-by-case basis.

d) Re-testing Policies

- No re-testing is allowed in Mathematics.

## Mathematics Sample Questions

- The selling price of a machine is 2 000 \$ after 10% discount, then another 20 % discount. What was the price of the machine before the sale?
  - 2777.78 \$
  - 1515.15 \$
  - 2640 \$
  - 1440.95 \$
  - 2970.78 \$
- What is the equation of line perpendicular to the line  $x=3$  and passes through the point  $A(2,-5)$ ?
  - $x = -5$
  - $x = 2$
  - $y = -5$
  - $y = 2$
  - $y = 5$
- What is the surface area of a cube whose volume is 216
  - 6
  - 36
  - 72
  - 144
  - 216
- If the height of a right circular cylinder is 4 times its circumference, what is the volume of the cylinder in terms of its circumference,  $C$ ?
  - $\frac{C^3}{\pi}$
  - $\frac{2C^3}{\pi}$
  - $\frac{2C^2}{\pi^2}$
  - $\frac{\pi C^2}{4}$
  - $\frac{4\pi C^3}{3}$
- What is the slope of the line that passes through  $(4,3)$  and is perpendicular to the line that passes through  $(-3,4)$  and  $(3,-4)$ ?

- a.  $\frac{-4}{3}$
- b.  $\frac{-3}{4}$
- c.  $\frac{3}{4}$
- d. 1
- e.  $\frac{4}{3}$

6. What is the ratio of the radius of circle to its circumference?

- a.  $\frac{1}{2\pi}$
- b.  $\frac{\pi}{2}$
- c.  $\sqrt{\pi}$
- d.  $\pi$
- e.  $2\pi$

7. If x is a positive number and  $\frac{2x}{5} = \frac{10}{x}$  then x=

- a. 3
- b. 4
- c. 5
- d. 50
- e. 25

8. If the arithmetic mean of 5, 6, 7 and x is 5. What is the value of x?

- a. 1
- b. 2
- c. 4
- d. 6
- e. 8

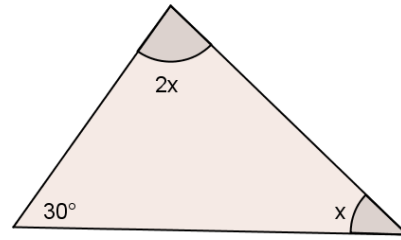
9. What is the value of  $\frac{a^2 - b^2}{a - b}$  when  $a = 2.5$  and  $b = 7.5$

- a. 5

- b. 6
- c. 7
- d. 9
- e. 10

10. If  $\frac{x}{2} + \frac{x}{6} + \frac{x}{9} = 20$ , what is the value of x?

- a.  $\frac{180}{7}$
- b.  $\frac{7}{180}$
- c.  $\frac{9}{70}$
- d.  $\frac{7}{18}$
- e.  $\frac{5}{18}$



11. If  $17 - 2\sqrt{x} = 12$ , what is the value of x?

- a. 72
- b. 144
- c.  $\frac{4}{25}$
- d.  $\frac{25}{4}$
- e. No value of x that satisfies the equation.

12. What is the area of an equilateral triangle whose altitude is 4?

- a. 24
- b. 2
- c.  $16\sqrt{3}$
- d. 4
- e.  $8\sqrt{3}$

13. In the triangle to the right, What is the value of x?

- a. 20
- b. 30
- c. 40
- d. 50
- e. 60

14. What is the equation of the line that passes through (4, -4) and (4, 4)?

- a.  $x = 4$
- b.  $y = 4$
- c.  $y = 4x$
- d.  $y = 4x + 4$
- e.  $y = 4x - 4$

15. If  $5x + 13 = 31$  what is the value of  $\sqrt{5x + 31}$ ?

- a.  $\sqrt{13}$
- b.  $\sqrt{\frac{173}{5}}$
- c. 7
- d. 13
- e. 169