**Q1.** Simplify the following expression: $\log_5 25^3 + \dfrac{1}{\log_{36} 6}$ .

A. 6  B. 4  C. 2  D. 8  E. 10

**Q2. Find x which satisfies the following equations:**

$0.5x + 0.2y = 3$

$x/2 + y/3 = 11/3$

A. 1  B. −1  C. 2  D. 4  E. 3

**Q3. The determinant of** $\begin{bmatrix} 2 & -1 \\ 1 & 3 \end{bmatrix}\begin{bmatrix} 1 & 2 \\ 3 & -1 \end{bmatrix} = ?$

A. 39  B. 55  C. −27  D. −49  E. 42

**Q4. Determine the area of the region surrounded by the following set of curves:**

$y = x^2 - x,$

$y = x.$

A. 3/2  B. 5/2  C. 5/3  D. 4/3  E. 2

**Q5. The profits, p, is described by p = (8 − q) q − 10, where q is the production output. Find the maximum profits when q > 0.**

A. 4  B. 7  C. 10  D. 6  E. 8

**Q6. Suppose today is Monday. Counting from tomorrow, the 1st day is Tuesday. Then the 604th day is _____.**

A. Sunday  B. Monday  C. Tuesday  D. Wednesday  E. Friday

**Q7. A debate team needs 2 boys and 2 girls. If there is a group of 5 boys and 6 girls, how many different teams can be formed for the group?**

A. 140  B. 95  C. 120  D. 150  E. 100

The answers for the sample questions above are all "D".