

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

- 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