

CLASS- XI

SUBJECT- MATHS

Q1 Find the multiplicative inverse of $(4-3i)$

Q2 Convert the complex number

$$z = \frac{i-1}{\cos \frac{\pi}{3} + i \sin \frac{\pi}{3}}$$
 in the polar form

Q3 300 trees are planted in a regular pattern in row in the shape of an isosceles triangle the numbers in the successive rows diminishing by one from the base to the apex. How many trees are there in the row which form the base of the triangle

Q4 Draw the venn diagram of

(i) $A \cap (B \cup C)$ (ii) $(A \cap B)^c$ (iii) $(A \cup B)^c$ Q5 Find the modulus of $\frac{1+i}{1-i} - \frac{1-i}{1+i}$ Q6 Write the number $z = (i - \sqrt{3})^{13}$ in algebraic form

Q7 If $U = \{1, 2, 3, \dots, 10\}$ is the universal set for the set $A = \{2, 3, 4, 5\}$ and $B = \{1, 2, 3, 4, 5, 6\}$ then verify that $(A \cup B)^c = A^c \cap B^c$

Q8 In an examination 80% students passed in mathematics, 72% passed in science and 13% failed in both the subjects. If 312 students passed in both the subject, find the total number of students who appeared in examination.

Q9 Find the square root of $-15-8i$

Q10 Let A , B and C be the sets such that
 $A \cup B = A \cup C$ and $A \cap B = A \cap C$. Show that
 $B = C$

Note - 1. Date of checking - till 3rd July

2. Test will be conducted after vacation.

(Syllabus for C.T. ch. 1, 5)