

SATISH CHANDRA MEMORIAL SCHOOL

CASE-STUDY TEST (2024-25)

IX

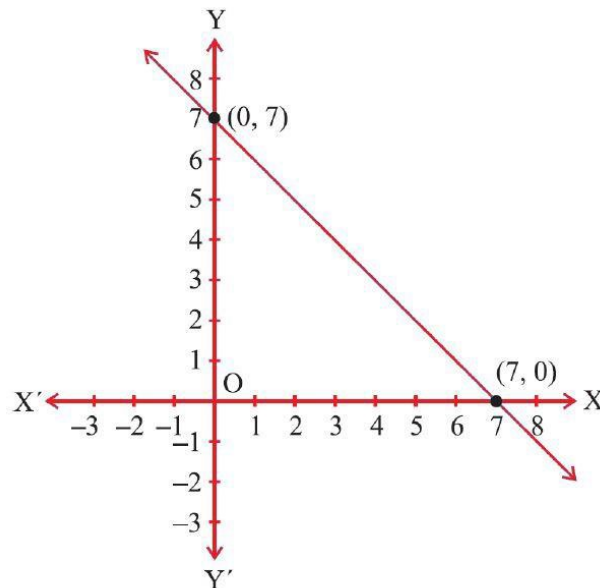
MATHEMATICS (041)

Time allowed: 30 min

Maximum Marks: 7 X 2 = 14

CASE STUDY -I

Q1. Aditya purchased two types of chocolates A and B at the rate of Rs. x and Rs. y respectively. The total amount spent is Rs. 7. After reaching home, he forms a linear equation in two variables for two types of chocolates. He prepares a table and a graph of the linear equation as shown in adjoining graph:



Based on the above information answer the following questions: (1+1+2+2+1=7)

- (i) How a represent the above situation in linear equations in two variables?

A) $2x+y=7$	B) $x+y=7$
C) $x=7$	D) $y=7$

- (ii) If the cost of chocolates A is 5, then find the cost of chocolates B?

A) 3	B) 1
C) 5	D) 2

(iii) Which of the following point lies on the line $x + y = 7$?

A) (3, 4)	B) (1, 5)
C) (5, 4)	D) (2, 6)

(iv) The point where the line $x + y = 7$ intersect y-axis is

A) (0, 4)	B) (7, 0)
C) (0, 6)	D) (0, 7)

(v) For what value of k , $x = 2$ and $y = -1$ is a solution of $x + 3y - k = 0$

A) 1	B) -1
C) 2	D) -2

CASE STUDY -II

Q2. In summer vacation, a school trip was planned and this was for class IX only. So, this trip was based on learning and fun. The trip organiser planned some activities based on real numbers and prepared some chits having real numbers and random students can pick 1 among them:



Based on the above information answer the following questions: $(1+1+1+2+2=7)$

A) Rajumal picked a chit on which $\sqrt{a}$ is mentioned. Which value of 'a' can make it an irrational number?

a) 1	b) 2
c) 4	d) 9

B) Sharanya picked a chit on which $\sqrt{27}$ is mentioned which of the following is true about $\sqrt{27}$?

a) It is an irrational number.	b) It is a rational number.
c) It is a natural number.	d) It is an integer.

C) Raman picked a chit of number $\frac{1}{\sqrt{7}-\sqrt{6}}$, after rationalization then, the denominator of the number will be:

a) Whole number	b) Natural number
c) integer	d) none of the above

D) The product of Sharanya's chit and Raman's chit is a/an _____

a) Irrational number	b) Rational number
c) integer	d) none of the above

E) The decimal form of $\frac{3}{11}$ is:

a) $0.2\bar{7}$	b) $0.\bar{27}$
c) $0.\bar{27}$	d) 0.27