

SETS

SUBJECT : MATHEMATICS

CHAPTER NUMBER:10

CHAPTER NAME :Negative Numbers and Integers,
Number Line, Playing with Numbers, Sets

SUBTOPIC :Recapitulation of the chapters

PERIOD NO:8

CHANGING YOUR TOMORROW

Learning outcomes

- Students will be able to find prime factors of a give number.
- Students will be able to find H.C.F of given pair of numbers.
- Students will be able to find L.C.M. of given numbers.
- Students will develop application skill.
- Students will be able to solve problems based on LCM.
- Students will be able simplify brackets.
- Students will develop application skill.
- Students will be able to apply BODMAS.
- Students will be able to find divisors of any given number.
- Students will be able to find multiples and factors of given numbers.
- Students will be able to define different types of sets.
- Students will be able to identify sets as finite or infinite set.
- Students will be able to define equal and equivalent sets .
- Students will be able to solve sums based on disjoint sets and overlapping sets

1. The product of two numbers is 36 and their sum is 13. Find the numbers.
2. The product of two numbers is 48 and their sum is 16. Find the numbers.

3. The traffic lights at three different road crossings change after every 48 sec, 72 sec and 108 sec respectively. If they change simultaneously at 7:00 am, at what time will they change simultaneously again?



4. Three tankers contain 403 litres, 434 litres and 465 litres of diesel. Find maximum capacity of a container that can measure the diesel of the three containers exact number of times.

1. State whether the given pairs of sets are equal or equivalent.

(i) $A = \{\text{first four natural numbers}\}$ and $B = \{\text{first four whole numbers}\}$.

(ii) $A = \text{Set of letters of the word "FOLLOW"}$ and $B = \text{Set of letters of the word "WOLF"}$.

(iii) $E = \{\text{even natural numbers less than 10}\}$ and $O = \{\text{odd natural numbers less than 9}\}$

(iv) $A = \{\text{days of the week starting with letter S}\}$ and $B = \{\text{days of the week starting with letter T}\}$.

(v) $M = \{\text{multiples of 2 and 3 between 10 and 20}\}$ and $N = \{\text{multiples of 2 and 5 between 10 and 20}\}$.

(vi) $P = \{\text{prime numbers which divide 70 exactly}\}$ and $Q = \{\text{prime numbers which divide 105 exactly}\}$

Additional Homework

1. The product of two numbers is 432 and their L.C.M. is 72. Find their H.C.F.

2. The product of two numbers is 19,200 and their H.C.F. is 40. Find their L.C.M.

3. Find which of the following numbers are divisible by 8:

(i) 324 (ii) 2536 (iii) 92760 (iv) 444320

4. Find which of the following numbers are divisible by 3:

(i) 221 (ii) 543 (iii) 28492 (iv) 92349

15. State, which pair of sets, given below, are equal sets or equivalent sets:

(i) $\{3, 5, 7\}$ and $\{5, 3, 7\}$ (ii) $\{8, 6, 10, 12\}$ and $\{3, 2, 4, 6\}$

(iii) $\{7, 7, 2, 1, 2\}$ and $\{1, 2, 7\}$

THANKING YOU
ODM EDUCATIONAL GROUP