STEPPING STONE SCHOOL (HIGH)

CLASS: V

Subject: Mathematics **Date: 05/06/2020**

Topic: Large Roman Numerals **Time Limit: 30 Mins**

Worksheet No.:16

[Copy the questions following the notes and solve them on a sheet of paper datewise. Keep the worksheets ready in a file to be submitted on the opening day]Go through the examples carefully before you attempt to solve the worksheet.

Instruction:- Open the video link given below and go through the step by step procedure to understand this lesson well.

https://youtu.be/Jd0Hzyc1SMk

LARGE ROMAN NUMERALS

In Class IV, we have learned how the Roman symbols I, V and X were used to write the Roman numerals for numbers 1 to 39. There is no Roman symbol to represent the digit 0. The values of the symbols are added or subtracted to find the value of the Roman numeral. Let us recapitulate the seven basic symbols and the rules for combining or repeating these symbols to write Roman numerals.

Symbols	I	V	X	L	C	D	M
Hindu-Arabic equivalent	1	5	10	50	100	500	1000

Rules for Forming Roman Numerals

Rule 1: When the same symbol is repeated one after the other, the product of the value of the symbol and the number of times it is repeated is the value of the numeral.

II = 1× 2=2 ; XXX = 10 × 3=30

Exception : The symbols V, L and D are never repeated. So 10 = X, and not VV. Similarly, if we want to write 100, we use the symbol C and not LL

Rule 2: If a symbol is written to the right of another symbol (i.e. after the symbol) of greater value, the value of the numeral is the sum of the values of the symbols.

VI = 5+1 = 6 ; XI = 10 + 1= 11

Rule3: If a symbol is written to the left of another symbol (i.e. before the symbol) of greater value, the value of the numeral is the difference of the values of the symbols.

IV= 5-1 = 4 ; IX = 10-1 = 9

Rule4: If symbols are combined, the value of a symbol of smaller value in the middle of two symbols of greater values is subtracted from the value of the symbol on it's right.

XIV = 10+(5-1)=14

XXXIX = 10+10+10+(10-1) =39

- There is no Roman symbol to represent the digit 0.
- A symbol can be repeated up to a maximum of three times only.
- A symbol of smaller value can be written to the left of the symbol of greater value only once.
- The symbols V, L and D are never repeated.

Example1: Write the value of the following Roman Numerals in Hindu Arabic numbers.

a) LXXVII= 50+(10 × 2) + 5+2= 77 (using Rules 1 and 2)
b) CXL = 100+(50-10) = 140 (Using Rule 4)

Example2: Write the Roman Numerals to represent the following Hindu –Arabic numbers.

a) 58= 50=8 = LVIII (using Rules 1 and 2)
b) 169= 100+50+10+(10-1)= CLXIX (using Rules 3 and 4)

Example3: Write the value of the following large Roman numerals in Hindu Arabic numbers

a) MDCLVIII= 1000+500+100+50+5+1+1+1 = 1658 (using Rule 2)
b) MMCDLIX=1000+ 1000+(500-100)+50+(10 -1) = 2459(using Rules 1, 3 and 4)

Q1) Match the Hindu- Arabic numerals to the Roman numerals of the same value

Roman numeral	**Hindu-Arabic numerals**
XX	29
XXIX	40
XXXV	20
XL	24

Q2) Write the Roman numerals to represent the following Hindu- Arabic numerals

a) 1,006
b) 510
c) 650
d) 2,000
e) 2,501

Q3) Write the Roman numerals that represent 65 to 75 in ascending order.

Q4) Write the Roman numerals that represent 185 to 175 in descending order.

Now let us do some Activity