

## Number and Place Value Prior Assessment Question 7:

Q7: I can read Roman numerals

I can recognise years written in these.

**NPV6 read Roman numerals to 1000 (M) and recognise years written in Roman numerals.**

### Teacher Input Ideas:

Show the children the credits for a television programme or a film they like. Ask the children to see if they can spot the year the film/programme was created. Encourage the children to look for any digits or words written in amounts. With the children, establish that many films and programmes display the year it was produced in Roman Numerals. Replay the clip and ask children to see if they can spot these.

Discuss:

- What are Roman numerals?
- Who created them?
- Why were they used?
- Where do we still see them now?

On large cards or around the classroom display the 7 main symbols that are used. Compare these to the digits we use.

Model use of I

Such as: III is 1+1+1 so this is 3.

Introduce other symbols such as V and X. Look at VIII and XXII. See if the children can work these out. Look at L, C D and M. Ask the children for suggestions of how we can remember these. There is purple support sheet that will help some children too.

Once the children show understanding how the symbols are placed together to create amounts by adding, introduce the rule that only 3 symbols can be used consecutively. If you need to use 4 of these symbols then subtraction is used. For example: 4 is not IIII but IV as it is one before 5 or one less than 5 so the I goes before the symbol. Repeat with other amounts to help the children understand. You may want to have symbols prepared for the children to create own.

When the children show understanding, you may want to share the green rule sheet with the children and practise how to read larger amounts such as years.

Dependent on the children's knowledge and understanding you may want to split the inputs and tasks over multiple lessons.

### Practice Activities

**Purple Practice:** Most suited for children that made errors in Q3 and show little understanding of Roman numerals.

The first sheet is a support sheet to remind the children of the 7 symbols and how they are often used together. This should help the children to work out the Roman numerals and write the amount in digits on the second sheet. The children have been provided with simpler amounts up to 1000.

**Green Practice:** Most suited for children that made errors in Question 3 and would benefit from applying knowledge to trickier amounts up to 1000.

Many children understand that symbols such as I and X can be used before other symbols to show one before such as IX. However, there are rules with the use of these and certain combinations cannot be used. Such as, IM cannot be used to show 999. A rule sheet has been provided in this task to help the children to work out trickier combinations of symbols. The second task sheet, requires the children to match green blocks with Roman numerals on, to purple blocks with the digits on. The children are to work out what the amount is in Roman numerals and find the corresponding purple block. For a challenge, too many green blocks have been provided. Some of the green blocks are not correct combinations as they have not followed the rules used with roman numerals. Can the children spot the rogue amounts?

**Yellow Practice** Most suited for children who made errors in Q3b and would benefit from reading Roman numerals to work out years.

The children are provided with TV screens which show the year different films were created. The children are to work out the years and write the amount in digits in the box beneath. The children may need to use the support sheets from the purple and yellow task to help.

**Mastery:** For this task, the children are to explain and show understanding that the system used by the Romans, does not follow the same rules and patterns that we use today by proving that some 3 digit numbers use more than 3 roman numerals. The children should be able to use their vocabulary to explain their understanding and provide examples of when our number system and the system used by the Romans have similarities and when they do not.

## Answers

### Purple:

III = 3

VIII= 8

XVI = 16

XIX= 19

XXXVI = 36

XC= 90

LXI=61

LXXXIV=84

CXII=112

MM= 2000

DCCX= 710

CD= 400

### Green:

340= CCCXL

49 = XLIX

302= CCCII

990= CMXC

490= CDXC

716= DCCXVI

999= CMXCIX

### Yellow:

1) 2001

2)2009

3) 2014

4)2017

5) 1992

6) 1980

7) 2010

8) 1985

9)1999

### Mastery:

- 1) accept examples such as IXI, IIX, CCV, CCI, CCX and CXV and children to explain why 3 roman numerals can be used in these numbers.
- 2) Accept any other examples where either 2, 4 or more symbols have been used to create 3 digit numbers and an explanation why.
- 3) Children to again provided examples of when 4 digit numbers use only 4 Roman numerals and when more and less are needed.

I	=	1
II	=	2
V	=	5
IV	=	(one before 5) 4
VI	=	(one after 5) 6
X	=	10
IX	=	(one before 10) 9
XI	=	(one after 10) 11
L	=	50
C	=	100
XC	=	(10 before 100) 90
CX	=	(10 after 100) 110
D	=	500
M	=	1000

Purple Activity

LO: I can read Roman numerals up to 1000 using a support sheet.

Use the support sheet to work out the Roman numerals in digits.



=



=



=



=



=



=



=



=



=



=



=



=

The Romans use only these numerals:

I V X L C D M

They add them together in order so it is easy to understand.

For example:

$$5+1+1+1$$

$$VIII = 8$$

$$10+10+10+5+1$$

$$XXXVI = 36$$

There is no need to use more than 4 of the same symbol in a row as a new symbol can be used, for example:

$$IIIIII = V \quad VIIIIII = X$$

If 4 are used then subtraction is used such as:

IIII is IV - one less than 5

VIIII is IX - one less than 10

XXXX is XL - ten less than 50

There are some rules with subtraction

1. You can only place I before a V or X

Examples: IV IX XXXIX

You cannot do IC for 99

2. You can only place an X before L or C

XL = 40 XC = 90 CCCXC = 390

So... 490 cannot be XD

3. C can only be used before D or M

So... CD = 400 CM = 900 MMCM = 2900

1999 would be **MCMXCIX**

$$\begin{array}{cccc}
 \swarrow & \downarrow & \swarrow & \searrow \\
 (1000) & + & (1000-100) & (100-10) & (10-1) \\
 & & 900 & 90 & 9
 \end{array}$$

Find the matching blocks. There should be one green block (Roman numerals) matched with one purple block (digits). **There are some green blocks that are not real Roman numerals.** Use the rule sheet to help you.

CCCII

340

CCCXL

49

DCCXVI

302

XD

490

IL

XLIX

CDXC

IM

990

CMXC

999

CMXCIX

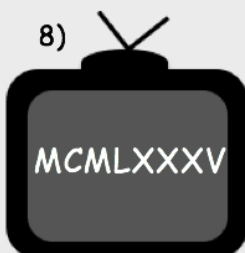
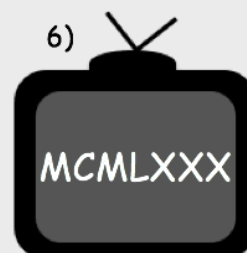
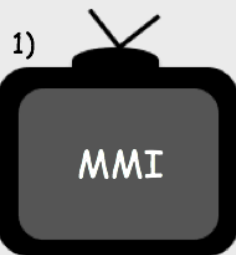
716

XM

Yellow Practise

LO I recognise years written in Roman numerals.

Look at the year written in Roman numerals at the end of each film. Write the year in digits.





Sacha says:

I would like to write a 3-digit number in roman numerals. That means I must use 3 roman numerals to create the number.

Find an example to prove that she is right and explain why she is right.

Find an example to prove she is wrong and explain why she is wrong.

What if she had a 4-digit number?