<u>Discussion Problems</u> Step 2: Roman Numerals

National Curriculum Objectives:

Mathematics Year 5: (5N3b) Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals

About this resource:

This resource has been designed for pupils who understand the concepts within this step. It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More Year 5 Place Value resources.

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Roman Numerals

1. A museum curator is trying to organise some vases for an upcoming display.

He wants to choose 5 vases out of the 10 below to place in chronological order for visitors to see. The age of the vase is written in Roman numerals below each one.

A. B. C. D. E.

DCCCLXXXIX CDXXXII CCXIII DCCLXXXV CDXIX

F. G. H. I.

CCLXXXVI CXVII CXVII CLVII XCIX

Explore which combination of vases the curator could include in the display and place them in chronological order.

2. Agent Sparrow is trying to uncover a secret PIN. He has found four codes that need to be converted into Roman numerals before being converted into a 3-digit pin.

Use the code breaker below to help you work out the pins.

9			21		24		1	2		3		4		13		3
I			V		X		L			O		D		M		
		·														
3	13	12	24	24	9	21	4	3	3	12	24	24	21	9	9	9
3	4	24	24	24	9	9	4	3	3	3	12	24	24	21	9	

Sparrow has discovered that the correct PIN is greater than 700 and is a multiple of 6. Investigate what the secret pin could be.

Roman Numerals

1. A museum curator is trying to organise some vases for an upcoming display.

He wants to choose 5 vases out of the 10 below to place in chronological order for visitors to see. The age of the vase is written in Roman numerals below each one.



Explore which combination of vases the curator could include in the display and place them in chronological order.

Various answers, for example: I, H, F, B and D.

2. Agent Sparrow is trying to uncover a secret PIN. He has found four codes that need to be converted into Roman numerals before being converted into a 3-digit pin.

Use the code breaker below to help you work out the pins.

9	21	24	12	3	4	13
I	V	X	L	С	D	M

3	13	12	24	24	9	21	4	3	3	12	24	24	21	9	9	9
С	M	L	X	X	-	٧	D	U	U	L	X	X	٧	_	-	I
3	4	24	24	24	9	9	4	3	3	3	12	24	24	21	9	
С	D	X	X	X	T	ı	D	С	С	С	L	X	X	٧	-	

The 3-digit pins are 974, 778, 432 and 876.

Sparrow has discovered that the correct PIN is greater than 700 and is a multiple of 6. Investigate what the secret pin could be.

The secret PIN is 876.

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