Reasoning and Problem Solving
Step 1: Roman Numerals

National Curriculum Objectives:

Mathematics Year 4: (4N3b) Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value
Mathematics Year 4: (4N6) Solve number and practical problems that involve all of the above and with increasingly large positive numbers

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Complete two missing sections in a part whole model containing Roman numerals up to 20.
Expected Complete two missing sections in a part whole model containing Roman numerals up to 100.
Greater Depth Complete more than two missing sections in a part whole model containing Roman numerals up to 100. Some inverse operation will be required.

Questions 2, 5 and 8 (Problem Solving)
Developing Write three addition/subtractions calculations involving four Roman numerals up to 20.
Expected Write three addition/subtractions calculations involving four Roman numerals up to 100.
Greater Depth Write three two-step addition/subtractions calculations involving four Roman numerals up to 100.

Questions 3, 6 and 9 (Reasoning)
Developing Prove if a statement is correct involving addition and subtraction for Roman numerals up to 20.
Expected Prove if a statement is correct involving addition and subtraction for Roman numerals up to 100.
Greater Depth Prove if a statement is correct involving 2-step addition and subtraction for Roman numerals up to 100.

More Year 3 and Year 4 Place Value resources.

Did you like this resource? Don't forget to review it on our website.

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Roman Numerals

1a. Using these numbers, find as many ways as you can to complete this part whole model.

VI	XII	XIV	VIII

D

4 PS

Roman Numerals

1b. Using these numbers, find as many ways as you can to complete this part whole model.

XVI	X	XII	XIV

D

4 PS

2a. Use these Roman numerals to write 3 calculations using addition or subtraction totalling no more than 20.

IV	XVI
XIX	VI

D

4 PS

2b. Use these Roman numerals to write 3 calculations using addition or subtraction totalling no more than 20.

IX	V
XI	XV

D

4 PS

3a. Reuben says:

Adding 2 Roman numerals which include V will always total 10 or more.

Is his statement correct? Prove it.

D

4 R

3b. Harley says:

Subtracting a Roman numeral which includes a V from a Roman numeral with an X will always equal 5 or less.

Is his statement correct? Prove it.

D

4 R

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Roman Numerals

4a. Using these numbers, find as many ways as you can to complete this part whole model.

LXXXVII	XVIII	LXIV	XLI

4 PS

Roman Numerals

4b. Using these numbers, find as many ways as you can to complete this part whole model.

III	LXIX	XC	XXIV

4 PS

5a. Use these Roman numerals to write 3 calculations using addition or subtraction totalling no more than 100.

XCII	XXXI
LXIX	XLIV

4 PS

5b. Use these Roman numerals to write 3 calculations using addition or subtraction totalling no more than 100.

XLIII	XXXIV
XCVII	XXIX

4 PS

6a. Luca says:

Adding 2 Roman numerals which include L will always total 100 or more.

Is his statement correct? Prove it.

4 R

6b. Thalia says:

Adding 3 Roman numerals which include X will always total more than 30.

Is her statement correct? Prove it.

4 R

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Roman Numerals

7a. Using these numbers, find as many ways as you can to complete this part whole model.

XLII | XXXVIII | XXII | XX

XXIX | LXII | XVI | LI

4 PS

Roman Numerals

7b. Using these numbers, find as many ways as you can to complete this part whole model.

LXXVII | XLI | XXXIV | XCIV

XXIV | LXXXVII | LXXXIV | L

4 PS

8a. Use these Roman numerals to write 3 calculations using 2-step addition and subtraction totalling no more than 100.

XCI	XLIX	XXIV
XXXIX	XIV	LXXIV

4 PS

8b. Use these Roman numerals to write 3 calculations using 2-step addition and subtraction totalling no more than 100.

LXXXIX	LXIV	XIII
XXI	XXIX	XVII

4 PS

9a. Eric says:

If I subtract a Roman numeral with an L in it from the Roman numeral C, my answer will always be 50 or less.

Is his statement correct? Prove it.

4 R

9b. Jay says:

If I add together a Roman numeral with a V, X and L, my answer will always be greater than 65.

Is his statement correct? Prove it.

4 R

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Reasoning and Problem Solving
Roman Numerals

Developing

1a. VI and XIV
XII and VIII
2a. Various answers, for example:
IV + XVI = XX; IV + VI = X
3a. No because if you had: IV (4) + V(5) = IX (9)

Expected

4a. XVIII and XLI
XLI and LXIV
LXIV and LXXXVII
5a. Various answers, for example:
XCII – XLIV = XLVIII; LXIX + XXXI = C
6a. No because If you had: XL(40) + XL = LXXX (80)

Greater Depth

7a. Various answers, for example:
XLII and XXXVIII and XX
XXIX and LI and XX
LXII and XVI and XXII
8a. Various answers, for example:
XCI – XLIX + XXIV = LXVI; LXXIV – XXXIX – XXIV = XI
9a. No because If you had: C(100) – XL (40) = LX(60)

Reasoning and Problem Solving
Roman Numerals

Developing

1b. XII and XIV
XIV and XVI
X and XII
2b. Various answers, for example:
X + V = XV; IX + V = XIV
3b. No because If you had: XII(12) – V(5) = 7 or X(10) – IV(4) = IX(9)

Expected

4b. III and XC
LXIX and XXIV
5b. Various answers, for example:
XCVII – XXIX = LXVIII; XLIII + XXXIV = LXXVII
6b. No because If you had: IX (9) + IX + IX = XXVII (27)

Greater Depth

7b. Various answers, for example:
XLI and XXXIV and XCIV
XLI and XXIV and LXXXIV
XXXIV and XXIV and LXXVII
XXXIV and XXXIV and LXXXVII
8b. Various answers, for example:
LXIV + XIII + XIX = XCVI; LXXXIX – XXI – XXIX = XXXIX
9b. No because If you had: IV(4) + IX (9) + XL (40) = LIII (53)

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