

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.

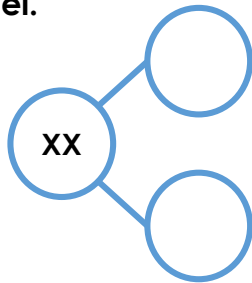
Greater Depth Prove if a statement is correct involving 2-step addition and subtraction for Roman numerals up to 100.

More [Year 4 and Year 5 Place Value](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Roman Numerals

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



VI

XII

XIV

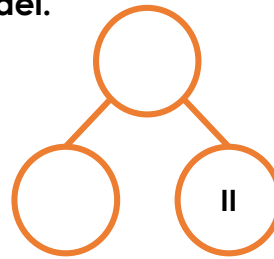
VIII



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



4 PS

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

IV

XVI

XIX

VI



4 PS

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

IX

V

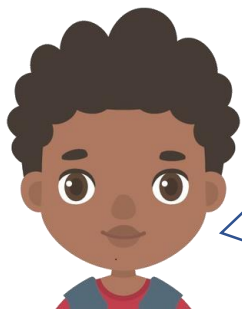
XI

XV



4 PS

3a. Reuben says:



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

Is his statement correct? Prove it.



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.

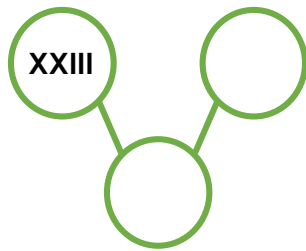
Is his statement correct? Prove it.



4 R

Roman Numerals

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



LXXXVII

XVIII

LXIV

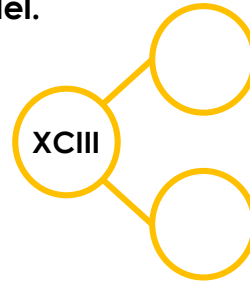
XLI



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.

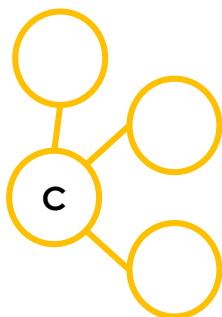
Is her statement correct? Prove it.



4 R

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

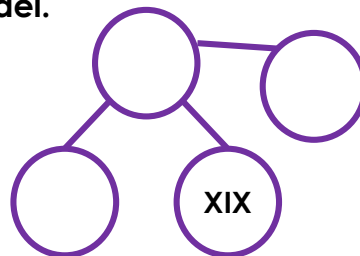
LI



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

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)