Year 5 Number and Place Value Roman Numerals

Maths Mastery Challenge Cards

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1. In Roman numerals, each letter represents a value. To read Roman numerals you add up the values of the letters used.

Find an example of a Roman numeral which proves that Lily is incorrect.

Share your answer with a partner.
Write an explanation of why Lily is incorrect.

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2. You should never write a Roman numeral using I, X or C, more than three times in a row.

Find an example of a Roman numeral which proves that Jiang is correct.

Share your answer with a partner.
Write an explanation of why Jiang is correct.

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3. Adam is investigating writing numbers up to 200 using Roman numerals.

Which of the numbers on Adam's list will have two Roman numerals?

How will you record your answers systematically?

Check your answers with a partner.

4. Lily is investigating writing numbers less than 1000 using Roman numerals.

Which of the numbers on Lily's list will have exactly three Roman numerals that will be different?

How will you record your answers systematically?

Check your answers with a partner.

5.

> To add these two Roman numerals together, all I need to do is combine all of the Roman numerals.

CCLXXVII + CLIX = CCCLLXXXVIII

Explain why Jiang is incorrect.

Try some of your own addition calculations with Roman numerals.

6. Adam is working out the answer to this subtraction calculation written using Roman numerals:

CCCXXIX - CLVII

Show how you could find the answer without converting the Roman numerals.

CCCXXIX - CLVII =

7. Lily wants to multiply two Roman numerals without converting the numbers.

CCLXXXIX × III =

Explain how to calculate the answer by combining the Roman numerals.

Year 5 Number and Place Value Roman Numerals Maths Mastery Challenge Cards **Answers**

1. "In Roman numerals, each letter represents a value. To read Roman numerals you add up the values of the letters used."

   Find an example of a Roman numeral which proves that Lily is incorrect.

   Share your answer with a partner. Write an explanation of why Lily is incorrect.

   Accept any explanation that refer to simply adding the values of the letters. For example, 496 = CDXCVI

   If we added add these values together we would get 716.

   When a smaller symbol is after a larger symbol, we use addition but when a smaller symbol is before a larger symbol, we use subtraction.

2. "You should never write a Roman numeral using I, X or C, more than three times in a row."

   Find an example of a Roman numeral which proves that Jiang is correct.

   Share your answer with a partner. Write an explanation of why Jiang is correct.

   Accept any correct explanation that refers to subtracting the letter values. For example, with Roman numerals, a group of four I, X or C is shown by subtracting the letter value from another letter. For instance, 4 = 5 - 1 = IV, 40 = 50 - 10 = XL, 400 = 500 - 100 = CD

3. Adam is investigating writing numbers up to 200 using Roman numerals.

   Which of the numbers on Adam's list will have two Roman numerals?

   How will you record your answers systematically?

   Check your answers with a partner.

   II   IV   VI   IX   XI   XV   XX   XL   LI   LV   LX   XC
   CI   CV   CX   CL   CC

4. Lily is investigating writing numbers less than 1000 using Roman numerals.

   Which of the numbers on Lily's list will have exactly three Roman numerals that will be different?

   How will you record your answers systematically?

   Check your answers with a partner.

   XIV, XVI, XLI, XLV, LIV, LVI, LIX, LXI, LXV, XCI, XCV, CIV, CVI, CIX, CXV, CXI, CXL, CLI, CLV, CLX, CDI, CDV, CDX, CDL, DIV, DVI, DIX, DXL, DLX, DCI, DCV, DCX, DCL, CMI, CMV, CMX, CML

5. "To add these two Roman numerals together, all I need to do is combine all of the Roman numerals."

   CCLXXVII + CLIX = CCCLLXXXVIII

   Explain why Jiang is incorrect.

   Try some of your own addition calculations with Roman numerals.

   Accept any explanation that explains that Roman numerals cannot just be added. For example, the two Roman numerals are 277 + 159, which equal 436. By combining all of the Roman numerals together, Jiang has created the answer 438. This also doesn't work because a group of four I, X or C is shown by subtracting the letter value from another letter.

6. Adam is working out the answer to this subtraction calculation written using Roman numerals:

   CCCXXIX - CLVII

   Show how you could find the answer without converting the Roman numerals.

   CCCXXIX - CLVII = **CLXXII**

   Accept any correct answer that involves combining the values. For example, combine the numbers so that each column has a larger number above.

   CCC - CL = CL

   XX - nothing = XX

   IX - VII = II

7. Lily wants to multiply two Roman numerals without converting the numbers.

   CCLXXXIX × III = **DCCCLXVII**

   Explain how to calculate the answer by combining the Roman numerals.

   CC × 3 = DC

   L × 3 = CL
   XXX × 3 = XC⎤ **= CL + XC = CCXL**

   IX × 3 = XXVII

   = DC + CCXL + XXVII

   = DC + CCLXVII = DCCCLXVII