1.2 Place Value, Negative Numbers and Roman Numerals: 30-minute Pack

NCETM National Curriculum (2014) Mathematics - KS2 Number: Place Value, Negative Numbers, Roman Numerals · Calculators not allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Convert between Roman numerals and Arabic (standard) numbers.

(a) Write 14 as a Roman numeral. **(1)**

(b) Write 29 as a Roman numeral. **(1)**

(c) What number does XLII represent? **(1)**

(d) What number does XIX represent? **(1)**

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2 A 6-digit number has: a 7 in the hundred thousands place; a 0 in the thousands place; it rounds to 730,000 when rounded to the nearest ten thousand; the sum of all six digits is 21. Find a number that fits all these clues. (There may be more than one correct answer; give one.)

(4)

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3 A weather station records temperatures and sensor readings over one week.

(a) The lowest temperature recorded that week was -6°C and the highest was 9°C. Work out the difference between the highest and lowest temperatures. **(2)**

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(b) The station's sensors took 428,750 individual readings that week. Round this number to the nearest ten thousand. **(2)**

(c) A scientist says: "430,000 rounded to the nearest hundred thousand is 500,000." Is the scientist correct? Explain your answer. **(2)**

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4 Complete the partition.

152,726 = 100,000 + ___ + 2,000 + 700 + 20 + 6

Answer: ___

(1)

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5 Find the missing number in this sequence.

413, 410, 407, 404, 401, ___

Answer: ___

(1)

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6 Estimate 7,486 - 3,744 by rounding each number to the nearest 1,000 first.

Answer: ___

(2)

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7 Write these numbers in order, starting with the smallest.

129,449, 131,967, 91,304, 143,728

Answer: ___

(1)

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8 Calculate XVI + XIV, giving your answer as a Roman numeral.

(2)

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9 Use each of the digits 8, 4, 5, 7 once to make the smallest possible 4-digit number.

Answer: ___

(2)

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10 A number line starts at 50,000 and goes up in equal steps of 10,000. An arrow points to the 3rd mark after the start.

What number does the arrow show?

Answer: ___

(1)

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Mark scheme · 1.2 Place Value, Negative Numbers and Roman Numerals: 30-minute Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

(a) XIV cao — **B1**

(a) Answer: **XIV**

(b) XXIX cao — **B1**

(b) Answer: **XXIX**

(c) 42 cao — **B1**

(c) Answer: **42**

(d) 19 cao — **B1**

(d) Answer: **19**

Question 2

sets up the number in the form 7_0___ using the hundred-thousands and thousands clues — **M1**

uses the rounding clue correctly, e.g. recognises the thousands digit must be less than 5 for the number to round down to 730,000, so the ten-thousands digit is 3 — **M1**

uses the digit sum (21) to find valid hundreds/tens/units digits, e.g. working shown — **A1**

any number consistent with all four clues cao, e.g. 730,353 (ft any number that satisfies every clue) — **A1**

Answer: **730,353 (accept any number of the form 730,abc where a + b + c = 11)**

Question 3

(a) 9 - (-6) oe — **M1**

(a) 15°C cao — **A1**

(a) Answer: **15°C**

(b) identifies the thousands digit (8) as the rounding digit — **M1**

(b) 430,000 cao — **A1**

(b) Answer: **430,000**

(c) no, with valid reason, e.g. the ten-thousands digit is 3, which is less than 5, so it rounds down oe — **B1**

(c) 400,000 stated as the correct value cao — **B1**

(c) Answer: **No; 430,000 rounds to 400,000, not 500,000.**

Question 4

50,000 cao — **B1**

Answer: **50,000**

Question 5

398 cao — **B1**

Answer: **398**

Question 6

7,000 and 4,000 seen — **M1**

3,000 cao — **A1**

Answer: **3,000**

Question 7

91,304, 129,449, 131,967, 143,728 cao — **B1**

Answer: **91,304, 129,449, 131,967, 143,728**

Question 8

converts both to Arabic numbers and adds, 16 + 14 = 30 oe — **M1**

XXX cao — **A1**

Answer: **XXX**

Question 9

digits placed in value order — **M1**

4,578 cao — **A1**

Answer: **4,578**

Question 10

80,000 cao — **B1**

Answer: **80,000**

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