Grade 4 Unit 1 test: Place value to a million and rounding

Name _____ Date _____ Period _____

12 questions, 39 points

1. In a storybook kingdom there have been many queens named Isabel. They are told apart by Roman numerals. The newest one is Queen Isabel LXIX. (2 points)

(a) Which Queen Isabel is she? Write her number in our digits.

(b) The next queen named Isabel will get the next number. Write that number in Roman numerals.

2. A baseball stadium's attendance for the whole season was 470,308. (3 points)

(a) Write the number in expanded form.

(b) Write the number in word form.

(c) In which place would a 3 be worth 1,000 times as much as the 3 in this number?

3. Three old bridges cross the river in Priya's town. Each bridge has a plaque that shows the year it was built.

Mill Bridge: MCMIX

Oak Bridge: $\mathrm{MCMXCIV}$

Stone Bridge: $\mathrm{MDCCCXCIV}$ (4 points)

(a) Write each year in our digits.

(b) List the three bridges from oldest to newest.

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4. A school district serves lunch on trays that come in stacks of 100. This year its kitchens used 391,500 trays, all in full stacks. (3 points)

(a) How many stacks of 100 trays is that? Explain how the places of 391,500 show it.

(b) Suppose the kitchens had used 10 more stacks. How many trays would that have been in all?

5. A newspaper says that four hundred thousand, sixty people came to a summer concert series. Three students write the number in standard form.

Ben writes 400, 60. Zoe writes 40,060. Malik writes 400,060. (3 points)

(a) Who is right?

(b) Explain the mistake each of the other two students made.

6. Sofia rounds 297,220 to the nearest ten thousand. The thousands digit is 7, so Sofia knows the number rounds up. Sofia changes the ten thousands digit from 9 to 0, puts zeros after it, and writes 200,000. (3 points)

(a) Explain why 200,000 cannot be right.

(b) What is the correct rounding?

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7. Samir runs a bookshop. He says, "Last year we sold about 13,800 books, to the nearest hundred. To the nearest thousand, that is about 13,000 books." Can both roundings be right? Explain how you know. (3 points)

8. The 62 fourth graders at Omar's school vote on a field trip. Each student votes once. Omar keeps a tally of the votes for each place.

The aquarium tally has 5 bundles of five and 2 single marks. The science center tally has 3 bundles of five and 2 single marks. All the other votes are for the apple orchard. (3 points)

(a) How many votes did the aquarium get? How many did the science center get?

(b) How many votes did the apple orchard get? Describe its tally: how many bundles of five and how many single marks?

9. The preface of a thick old atlas has its pages numbered in Roman numerals. Isaac looks at two of its pages: page XXXVIII and page XLII. (3 points)

(a) Write both page numbers in our digits.

(b) Isaac says page XXXVIII must come later in the book, because its numeral has more symbols. Explain why he is wrong.

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10. The fourth grade sells raffle tickets at the spring fair. Every ticket number is a six-digit number that uses each of the digits 0, 1, 3, 5, 7 and 9 exactly once. (4 points)

(a) The first prize goes to the greatest ticket number in which the 1 is worth 10,000. What is that ticket number?

(b) The second prize goes to the least ticket number in which the 5 is worth 5,000. What is that ticket number?

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11. (4 points)

(a) Round 148,620 and 151,380 to the nearest ten thousand.

(b) Round 148,620 and 151,380 to the nearest hundred thousand.

(c) Owen says, "If two numbers round to the same number at one place, they must round to the same number at a bigger place too, because the bigger place drops even more digits." Use your answers to explain why Owen is wrong.

12. A whole number rounds to 25,000 to the nearest thousand and to 30,000 to the nearest ten thousand. What is the least the number could be, and what is the greatest? (4 points)

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