Worksheet - Place value to 10 000 and Roman numerals

Year: Year 4 · 20

Show your working.

Question 1

Question 1 – Reading and writing numbers *(Section A · Practice)*

Write each number in digits or in words.

a. Four thousand, six hundred and thirty-two
b. Seven thousand and ninety
c. 5 308
d. 9 040

Question 2

Question 2 – Place value table *(Section A · Practice)*

Write each number in a place value table with the headings Th, H, T and O. Then write the value of the digit in bold.

a. 6 **2**85
b. 4 7**3**0
c. **8** 106
d. 2 599 (the last 9)

Question 3

Question 3 – Partitioning *(Section A · Practice)*

Partition each number into thousands, hundreds, tens and ones. Then write the number that has been partitioned in part (d).

a. 3 821
b. 5 070
c. 9 009
d. 6000 + 300 + 40 + 7

Question 4

Question 4 – Ordering numbers *(Section A · Practice)*

Write the numbers in order. Use the signs < and > in part (c).

a. Smallest first: 5 281, 5 812, 5 218, 2 851
b. Largest first: 7 090, 7 009, 7 900, 7 099
c. Put < or > in the box: 6 482 [ ] 6 428 and 3 099 [ ] 3 101

Question 5

Question 5 – Counting in steps *(Section A · Practice)*

Continue each sequence by writing the next three numbers.

a. 2 340, 3 340, 4 340, …
b. 9 600, 9 500, 9 400, …
c. 7, 14, 21, 28, … (counting in 7s)
d. 25, 50, 75, … (counting in 25s)

Question 6

Question 6 – Rounding *(Section A · Practice)*

Round each number to the nearest 10, to the nearest 100 and to the nearest 1000. Copy and complete the table.

Number	Nearest 10	Nearest 100	Nearest 1000
3 674	?	?	?
5 249	?	?	?
8 995	?	?	?

Question 7

Question 7 – The football stadium *(Section B · Real-life practice)*

Rovers Park is a football ground. On Saturday, 4 637 fans came to watch the home team. On Sunday, 4 673 fans came to the youth cup final. The ground can hold 7 500 fans.

a. Which match had more fans? Explain how you know.
b. Round the Saturday number to the nearest 100.
c. Round the Sunday number to the nearest 10.
d. How many more fans could fit into the ground on Saturday? Round your answer to the nearest 100 if you wish.

Question 8

Question 8 – Books in the library *(Section B · Real-life practice)*

The school library has 3 258 fiction books, 1 940 non-fiction books and 2 062 picture books. Mr Patel writes the numbers on a poster, but he wants to use rounded numbers to make the poster easy to read.

Type of book	Number of books
Fiction	3 258
Non-fiction	1 940
Picture books	2 062

a. Round each number to the nearest 100.
b. Round each number to the nearest 1000.
c. Which type of book has the most? Which has the fewest?
d. Mr Patel says, "Non-fiction and picture books are the same when rounded to the nearest 1000." Is he right? Explain.

Question 9

Question 9 – Pocket money jars *(Section B · Real-life practice)*

Ella, Sam and Zara are saving pennies in jars. Ella has 2 035 pennies, Sam has 2 305 pennies and Zara has 2 350 pennies.

a. Write their numbers in order, starting with the smallest.
b. Who has the most pennies? How many more than Sam?
c. Zara saves 100 more pennies each week. How many will she have after 3 weeks?
d. Sam saves 10 pennies each day. How many pennies will he have after 5 days?

Question 10

Question 10 – Roman numeral clock *(Section B · Real-life practice)*

The clock on the old town hall uses Roman numerals instead of digits. A visitor looks at the clock face and at the plaques on the wall, which also use Roman numerals.

a. What do the numerals IX and XI show on the clock? Which of the two is bigger?
b. Write 4, 7 and 12 in Roman numerals.
c. A plaque by the door says XLVII. What number is that?
d. The bell is rung every 25 minutes. Write 25 and 75 in Roman numerals.

Question 11

Question 11 – Counting the biscuits *(Section B · Real-life practice)*

A bakery bakes biscuits in boxes. One box holds 25 biscuits. The baker packs boxes for a school party and counts in 25s: 25, 50, 75 …

a. Write the first eight numbers in the sequence.
b. How many biscuits are there in 6 boxes?
c. The school wants 400 biscuits. How many boxes is that?
d. The baker has 1 000 biscuits. How many full boxes can she fill?

Question 12

Question 12 – Mountain heights *(Section B · Real-life practice)*

Four mountains in the UK have these heights in metres: Ben Nevis 1 345, Snowdon 1 085, Scafell Pike 978 and Helvellyn 950.

Mountain	Height (m)
Ben Nevis	1 345
Snowdon	1 085
Scafell Pike	978
Helvellyn	950

a. Which is the highest? Which is the lowest?
b. Write the heights in order, highest first.
c. Round each height to the nearest 100 m.
d. Which two mountains have the same rounded height? What is it?

Question 13

Question 13 – Number detective *(Section B · Real-life practice)*

Katie is thinking of a 4-digit number. The thousands digit is double the ones digit. The hundreds digit is 5. The tens digit is zero. The ones digit is 3.

a. Write Katie's number.
b. Write it in words.
c. Round it to the nearest 100.
d. Write the number that is 1000 more and the number that is 100 less.

Question 14

Question 14 – School fair tickets *(Section C · Problem solving)*

The school fair sold tickets over four days. The table shows the number of tickets sold each day.

Day	Friday	Saturday	Sunday	Monday
Tickets sold	1 296	2 408	3 150	1 096

a. Which day sold the most tickets? Which sold the fewest?
b. Round each number to the nearest 100.
c. Add the four rounded numbers to estimate the total for the four days.
d. The head teacher hoped to sell 8 000 tickets. Use your estimate to say if the school was close. Explain.
e. The organisers say that Friday and Monday were almost the same when rounded to the nearest 1000. Do you agree?

Question 15

Question 15 – Digit cards *(Section C · Problem solving)*

Aisha has four digit cards: 3, 0, 8 and 5. She uses all four cards to make 4-digit numbers. A number cannot start with 0.

a. Make the biggest number you can.
b. Make the smallest number you can.
c. Make an even number that is bigger than 8 000. How many different answers are there?
d. Round the biggest number and the smallest number to the nearest 1000. What is the difference between the rounded numbers?

Question 16

Question 16 – The museum timeline *(Section C · Problem solving)*

A museum has a timeline of famous buildings. The date of each building is written in Roman numerals on a label. The labels are shown below.

Building	Roman label	Number
Bridge arch	XCIV	?
Castle wall	LXXXVIII	?
Church bell	XLIX	?
Lighthouse	CVII	?

a. Write the number for each label (the last one has C = 100).
b. The labels give the age in years. Which building is the oldest and which is the youngest?
c. Write the ages in order, youngest first.
d. The museum guide says, "IC is 99." Explain why this is wrong, and write 99 correctly.

Question 17

Question 17 – Delivery lorry *(Section C · Problem solving)*

A lorry delivers parcels to shops in four towns. The table shows how many parcels it carries to each town this week. The lorry can carry at most 10 000 parcels in a week.

Town	Parcels
Ashby	2 706
Bexley	2 760
Corfe	2 076
Dunmore	2 670

a. Put the towns in order from the most parcels to the fewest.
b. Round each number to the nearest 100.
c. Add the four rounded numbers to estimate the total. Is the estimate more or less than 10 000?
d. Work out the exact total. Does the lorry have enough space? Explain why an estimate is not always enough for this question.

Question 18

Question 18 – Roman numeral cards *(Section C · Problem solving)*

Raj is making Roman numeral cards for a class game. He writes these numbers on cards: LIV, XLVI, LXIII and XCV. He also writes IIX on a card and says it means 8.

a. Write the value of each of the four numerals.
b. Put the four numerals in order, smallest first.
c. Write 14, 29 and 83 in Roman numerals.
d. Explain what is wrong with IIX and write 8 correctly.

Question 19

Question 19 – Sponsored walk *(Section C · Problem solving)*

Year 4 take part in a sponsored walk to raise money for a new playground. Each class counts how many steps its pupils walked. The class teachers record the totals in a table. A pedometer counts every step.

Class	Steps walked
4A	9 480
4B	9 048
4C	8 940
4D	9 804

a. Which class walked the furthest? Put the classes in order, furthest first.
b. Round each class total to the nearest 100 steps.
c. The target for the whole year group is 40 000 steps. Use your rounded numbers to say whether they reached it. Then work out the exact total.
d. Mrs Green says, "4B and 4C were nearly equal." Use the numbers to decide if she is right. How many steps are between them?

Question 20

Question 20 – Challenge: the mystery number *(Section D · Challenge)*

Zara thinks of a 4-digit number. She gives these clues:

- When rounded to the nearest 1000 it is 6 000.

- When rounded to the nearest 100 it is 5 900.
- The digits add up to 23.
- The ones digit is double the tens digit.
- All four digits are different.

a. Write the smallest and the largest number that round to 5 900 to the nearest 100.
b. Find Zara’s number. Show how you found it.