Unit 3 · Number Sense

HARDER PRACTICE QUESTIONS

Full marks 33

Write your answers on separate paper. Show your working. Write numbers with commas in the national system unless a question asks for the international one.

1 Find the number from the clues [4]

I am a nine-digit number.

- My ten crore digit is the biggest one-digit prime number.
- My crore digit is the only even prime number.
- The place value of my ten lakh digit is 0.
- My lakh digit is 1 more than my ten crore digit.
- My ten thousand digit and my lakh digit add up to 9.
- The place value of my thousand digit is 5,000.
- My hundred digit is the smallest composite number.
- My tens digit is the only number from 1 to 9 that is neither prime nor composite.
- My ones digit is the only odd one-digit number that is composite.

i. Who am I? Write me with commas in the national system.
ii. Write me in words in the national system.
iii. Write me with commas and in words in the international system.

2 How many in all? [3]

Look at the number 45,67,89,123.

i. How many lakhs are there in it in all?
ii. Write it in the international system. How many millions are there in it in all?
iii. Explain why your answer to ii is the answer to i divided by 10, leaving out the remainder.

3 Spot the error [3]

Prapti wrote “sixty crore four lakh nine” in figures as 60,4,00,009.

i. What is wrong with her number?
ii. Write it correctly in the national system.
iii. Write it in the international system.

4 Three 7s, very different [3]

In the number 3,73,47,175, the digit 7 comes three times.

i. Write the place value of each 7.
ii. How much more is the biggest place value than the middle one?
iii. Does any of the three 7s have the same face value and place value? Give a reason.

5 Rounding backwards [4]

i. Rabina rounded a whole number to the nearest hundred and got 4,700. What is the smallest number it could have been? What is the biggest?
ii. Another whole number rounds to 350 to the nearest ten, and to 300 to the nearest hundred. Find every number it could be.

6 Cards with digits [3]

Shristi has nine digit cards: 0, 1, 2, 3, 4, 5, 6, 7 and 8. She uses all nine to make nine-digit numbers.

i. What is the biggest number she can make?
ii. What is the smallest? (A number can't start with 0.)
iii. What is the smallest **odd** number she can make?

7 Census numbers [3]

The final count of the census of 2078 BS was 2,91,64,578 people (the number in the unit).

i. Round it off to the nearest thousand.
ii. A newspaper says "about 29 million people". Explain where the 29 comes from.
iii. Another says "about 3 crore people". Is 2,91,64,578 nearer to 2 crore or to 3 crore? Give a reason.

8 Sums of primes [4]

i. Write 40 as the sum of two prime numbers in every way you can. (3 + 37 and 37 + 3 count as one way.)
ii. Can 27 be written as the sum of two prime numbers? Give a reason. Hint: think about odd and even numbers.

9 True or not? [3]

Ankit says: "The place value of a digit is always bigger than its face value." Is he right? Give two examples that show your answer.

10 Think [3]

Make up a nine-digit number that changes its **lakh** digit when you round it off to the nearest **thousand**. Show the rounding, and explain why this happens with your number.