Stars – Book 1

Knowing our numbers

Module 1: Numbers – Large numbers and place value

L1   Review

1.1   Introduction

At this stage you are quite familiar with numbers having 1 to 4 digits. You can count them, organize them, compare them, and perform all the 4 arithmetic operations on them – addition, subtraction, multiplication, and division (single digit divisors only).

After a brief review of what you have learnt so far, we will move on to understanding larger numbers and mastering their manipulation.

1.2   Comparing numbers

1.2.1 Can you instantly find the greatest and smallest numbers in each row?

Numbers	Greatest	Smallest
382, 4972, 18, 59785, 750		
1473, 89423, 10, 246, 1		
1834, 75284, 111, 2333, 450		

1.2.2 Was that easy? Why?

All the numbers in each row have different number of digits. We know that the **number with the most number of digits is the greatest** and the **number with the least number of digits is the smallest**.

1.2.3 How do we compare 4875 and 3542?

This is also quite easy. The number of digits is the same but we know that the number with the greater digit in the left most position (thousands) is the greater number. If those digits are also the same we look at the next digit to the right and compare those, and so on and so forth.

1.2.4 Find the greatest and smallest numbers in the following:

Note: You may not be able to read some of those numbers but you could definitely figure out which was the greatest and which was the smallest.

Numbers	Greatest	Smallest
4536, 4892, 4370, 4452		
15623, 15073, 15189, 15800		
252863, 252454, 252701, 252310		

1.3   Making numbers from digits

1.3.1 Suppose we have 4 digits 7, 8, 3, 5. We want to make different 4-digit numbers using these digits such that no digits are repeated in each number.
For example, you can make 7835 and 3578 but 7738 is not allowed because 7 is repeated and 5 is not used.

a. What is the greatest number you can make?
b. What is the smallest number?
c. Can you write down how you make the greatest number and the smallest number?

1.3.2 Use the given digits without repetition and make the greatest and smallest 4-digit numbers.
Note that 0753 is a 3 digit number and is therefore not allowed.

Digits	Greatest	Smallest
2, 8, 7, 4		
9, 7, 4, 1		
4, 7, 5, 0		
1, 7, 6, 2		
5, 4, 0, 3		

1.3.3 Now make the greatest and smallest 4-digit numbers by using any one digit twice. Hint: Think about which digit you will use twice.

Digits	Greatest	Smallest
3, 8, 7		
9, 0, 5		
0, 4, 9		
8, 5, 1		

1.3.4 Make the greatest and smallest 4-digit numbers using any 4 different digits with conditions as given. One example has been done for you.

Condition	Greatest	Smallest
Digit 7 is always at the ones place (Note that even though 0 is the smallest digit, we cannot use it as the 4th or the leftmost digit because then the number would be a 3 digit number – 0127 is actually just 127)	9867	1027
Digit 4 is always at the tens place		
Digit 9 is always at the hundreds place		
Digit 1 is always at the thousands place		

1.4 Arrange in proper order

1.4.1 See figure below. Stand in proper order.
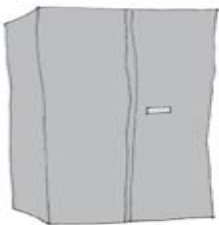

Ramhari   Dolly   Mohan   Shashi
(160 cm) (154 cm) (158 cm) (159 cm)

a. Who is the tallest?
b. Who is the shortest?
c. Can you arrange them in the increasing order of their heights?
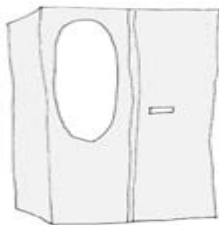d. Can you arrange them in the decreasing order of their heights?

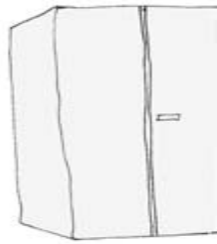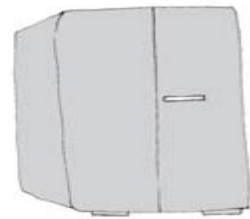1.4.2 Which to Buy? See the figure below.

Rs. 2635   Rs. 1897   Rs. 2854   Rs. 1788   Rs. 3975

Sohan and Rita went to buy an almirah. There were many almirahs available with their price tags.

a. Can you arrange their prices in increasing order?
b. Can you arrange their prices in decreasing order?

1.5   Ordering numbers

Ascending order means arrangement from smallest to greatest (climbing up)
Descending order means arrangement from greatest to smallest (climbing down)

Note that you may not be able to read some of these numbers. However,
1.5.1 Arrange the following in ascending order.
a. 847, 9754, 8320, 571
b. 9801, 26751, 36501, 38802

1.5.2 Arrange the following in descending order.
a. 5000, 7500, 85400, 7861
b. 1971, 45321, 88715, 92549

End of L1