

**Himalaya International School**

**Class - VII**

**Subject - Mathematics**

**Assignment- 1**

**Rational Numbers**

**Exponents and Powers**

**Data Handling**

**Probability**

**Q1 Find the value of:**

**(i)  $2^6$**

**(ii)  $5^4$**

**Q2 Draw the number line and represent the following rational numbers on it:**

**(i)  $\frac{3}{5}$**

**(ii)  $\frac{7}{4}$**

**Q3 Arrange the following rational numbers in descending order:**

**$\frac{4}{21}$ ,  $\frac{-6}{7}$ ,  $\frac{23}{35}$ ,  $\frac{9}{-14}$**

**Q4 Organise the following marks in a class assessment in a tabular form.**

**4, 6, 7, 5, 3, 5, 4, 5, 2, 6, 2, 5, 1, 9, 6, 5, 8, 4, 6, 7**

**(i) Which number is the highest?**

**(ii) Which number is the lowest?**

**(iii) What is the range of the data?**

**(iv) Find the arithmetic mean.**

**Q5 The scores in the Mathematics test (out of 25) of 15 students are as follows:**

**19, 25, 23, 20, 9, 20, 15, 10, 5, 16, 25, 20, 24, 12, 20**

**Find the mode and median of this data. Are they the same?**

**Q6 A bag contains 4 green balls, 4 red balls and 2 blue balls. If a ball is drawn from the bag, what will be the probability of getting neither green nor red ball?**

**Q7 Express each of the following numbers using the exponential notation:**

**(i) 512**

**(ii) 3125**

**Q8 Simplify:**

(i)  $2 \times 10^3$

ii)  $0 \times 10^2$

iii)  $(-3)^2 \times (-5)^2$

Q9 Using laws of exponents, simplify and write the answer in exponential form:

(i)  $3^2 \times 3^4 \times 3^8$

ii)  $(5^2)^3 \div 5^3$

iii)  $((5^2)^3 \times 5^4) \div 5^7$

iv)  $(25 \times 5^2 \times t^8) \div (10^3 \times t^4)$

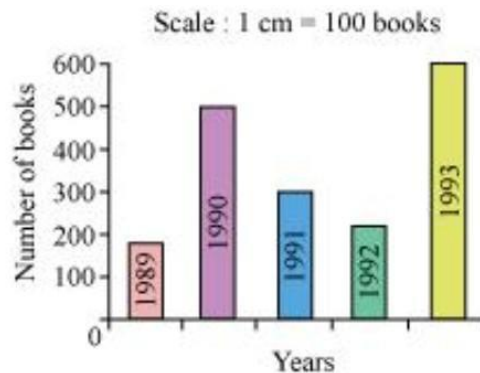
Q10 Find the value of:

(i)  $\frac{7}{24} - \frac{17}{36}$

ii)  $\frac{-6}{13} - \left(\frac{-7}{15}\right)$

Q11 Find the mean of the first five whole numbers.

Q12 Read the bar graph (see the given figure) which shows the number of books sold by a bookstore during five consecutive years and answer the questions that



follows:

(i) About how many books were sold in 1989? 1990? 1992?

(ii) In which year were about 475 books sold? About 225 books sold?

(iii) In which years were fewer than 250 books sold?

Q13 If Tanya uses  $\frac{4}{5}$  paint cans to paint 1 cupboard, then how many cans of paint will she use for painting 4 such cupboards?

Q14 Riya lives  $\frac{4}{5}$  km away from school and Anam lives  $\frac{3}{4}$  km away from school.

Who lives farther from school?

Q15 Evaluate:

(i)  $\frac{-4}{5} + \frac{-5}{15} + \frac{2}{10}$

(ii)  $\frac{5}{6} \times \frac{-7}{14} \times \frac{8}{15}$

Q16 Insert six rational numbers between  $\frac{3}{8}$  and  $\frac{3}{5}$ .

Q17 A coin is tossed once. Find the probability of

(i) getting a head.

(ii) not getting a head.

Q18 Write the following numbers in the expanded form.

i) 279404

ii) 20068

Q19 Express the number appearing in the following statements in standard form.

(a) The distance between Earth and Moon is 384,000,000 m.

(b) Speed of light in a vacuum is 300,000,000 m/s.

Q20 Number of children in six different classes is given below. Represent the data on a bar graph.

Class:	V	VI	VII	VIII	IX	X
Number of Children:	135	120	95	100	90	80

(i) How do you choose the scale?

(ii) Which class has the maximum number of children?

(iii) Which class has the minimum number of children?