CASE STUDIES

1. The scores of eight groups in 4 rounds of quiz competition in a class of 40 students are listed in the following table:

NAME	ROUND 1	ROUND 2	ROUND 3	ROUND 4	TOTAL SCORE
GROUP A	+10	-8	-15	+25	
GROUP B	-6	-13	+20	-1	
GROUP C	-3	+10	+14	+3	
GROUP D	+21	+12	-7	+1	
GROUP E	+7	-15	+12	-4	
GROUP F	0	-9	-1	+2	
GROUP G	-11	+23	0	-3	
GROUP H	+22	-11	-15	+13	

Answer the following questions:

a) Calculate the total score of all the groups after completion of all the four rounds.
b) Which group or groups had the lowest score?
c) Which group or groups had the highest score?
d) Name the pair or pairs of groups who scored equally.
e) Find the ratio of total score of group A to that of group H?
f) What will be the reciprocal of total score of group F?
g) What will be the value of the reciprocal of total score of group B?
h) What is the range of total scores?
i) Subtract group D total score from group F total score.
j) Which round is the best round for group E?

2. In a test '+4' marks are given for every correct answers and '+1' mark is deducted for every incorrect answers and zero marking for unattempt question. Shilpa attended all except three questions. She got four correct answers and finally all total she scored '13' marks.

a) Find marks she lost for incorrect answers.
b) Find the number of incorrect answers.
c) Find the total number of questions in the test.
d) What will be the additive and multiplicative inverse of '-1'?
e) Write a pair of one positive and one negative integer whose sum will be '-3'?
f) Classify the following words into two categories according to the (+) or (-) sign they assign to the integers: below, profit, increase, deduction, exceed, loss, descend, above, decrease, fall, high, rise, low, deposit, win, right, withdraw, left, loose, success, failure, increment, drop.
g) What will be the value of the product of additive and multiplicative identity?
h) What will be the value if '-1' is multiplied 2n times where n is natural number?
i) Can we call '-1' as the multiplicative identity of integers? Why or Why not?
j) How many integers are there between '-32' and '+5'?

HOTS QUESTIONS

1. By how much does '2' exceeds '-5'?
2. Write the digits 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 in this order and insert '+' or '-' between them so as to get the result '3'.
3. Write the integer which its own additive inverse.
4. Write two distinct integers whose sum is equals to one of the integer.
5. Write two integers whose sum is '6' and difference is also '6'.
6. At Srinagar the temperature was -3°C on Monday and dropped by 1°C on Wednesday. If the temperature of Srinagar on Wednesday is -1°C, how much is the increase or decrease in temperature on Tuesday?
7. In a test '+5' marks is allotted for every correct answer and '-2' marks for every incorrect answer. Jaya answered all the questions and scored 30 marks. She has total 10 correct answers. Find out the number of incorrect answers.
8. The difference of two integers is '-100'. If one of the integer is '-40', find the other.
9. In a building, there are 9 floors above ground and 4 floors below the ground. An elevator starts ascending from the second floor below the ground. If the elevator reaches each floor in three minutes, where would it be in 15 minutes after the start?
10. List out five places or situations from your real life where you have used integer's concept.

CLASS: VII

SUBJECT: MATHEMATICS

CHAPTER-1: INTEGERS

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