

SELF-STUDY MATERIAL

CLASS-VII MATHEMATICS

TOPIC – INTEGERS

1)	Write down a pair of integers whose (i) Sum is -3 (ii) Difference is -5 (iii) difference is 2 (iv) sum is 0
2)	Write a pair of integers whose difference gives (i) a negative integer (ii) an integer smaller than both the integers (iii) an integer greater than both the integers
3)	In a competition two teams participated, one scored -17, 32 and -45. Second team scored 32, -45 and -17. Which team score more? Can we say that we can add integers in any order.
4)	Evaluate $-x$ (or additive inverse of x) from the following (i) $x = +6$, (ii) $x = -5a$ (iii) $x = -7 - 12$
5)	Verify $(a+b) + c = a + (b+c)$ for following $a = -138$, $b = -39$, $c = 57$
6)	(a) Add -5 and -16 (b) Subtract -42 from 50.
7)	A man travelled 60 km to the east of Delhi and then 100 km to the west of it. How far from Delhi was he finally?
8)	Determine the integer whose product with -1 is (i) -32 (ii) 0 (iii) 47
9)	Verify the following :- $(-30) \times [13 \times (-3)] = [(-30) \times 13] + [(-30) \times (-3)]$
10)	Evaluate :- (i) $(-53) \div [(-50)+(-3)]$ (ii) $[(-18) \div (-6)] \div [(-17) - (-16)]$
11)	Complete the following statement. (i) $297 \div \underline{\hspace{2cm}} = 297$ (ii) $(-85) \div \underline{\hspace{2cm}} = -1$ (iii) $(-405) \div \underline{\hspace{2cm}} = 1$ (iv) $-97 \div \underline{\hspace{2cm}} = 97$ (v) $\underline{\hspace{2cm}} \div 1 = -97$ (vi) $30 \div \underline{\hspace{2cm}} = -3$ (vii) $\underline{\hspace{2cm}} \div 58 = -1$ (viii) $\underline{\hspace{2cm}} \div 6 = -5$
12)	The temperature of Delhi which was 42°C fell by 2°C each day for a week. What is the temperature after whole week.
13)	Verify that $a \div (b+c) \neq (a \div b) + (a \div c)$ if $a = 15$, $b = -3$ and $c = 1$

14)	An elevator descends into a mine at the rate of 6 metres per minute. (i) What will be its position after two hours? (ii) If it begins to its descend from 15m above the ground, what will be its position after 45 minutes.
15)	A tank is full of 2000 litres of water. Due to leakage the quantity changes by – 4 litres every hour. How long will it take to get empty?
16)	Find the product using suitable property. (i) $46 \times (-48) + (-48) \times (-36)$ (ii) -37×102 (iii) $725 \times (-55) + (-725) \times 65$ (iv) $-67 \times (-19) + 67$ (v) $16 \times 39 \times (-25)$
17)	In a class test containing 15 questions, 4 marks are given for every correct answer and (-2) marks are given for every incorrect answer. Preeti gives only 5 answers correct. What will be her score?
18)	In a class test (+5) marks are given for every correct answer and (-2) marks are given for every incorrect answer and no marks for not attempting any question. (i) Radhika scored 20 marks. If she has got 12 correct questions. How many questions has she attempted incorrectly? (ii) Mohini scores – 5 marks in this test though she has got 7 correct answers. How many questions has she attempted incorrectly? (iii) Rakesh scores 18 marks by attempting 16 questions. How many questions has he attempted correctly and how many questions he attempted incorrectly?
19)	A container contains temperature of water 80°C After every 10 minutes, the change in temp. is -4°C . After how much time will the temperature of water be 20°C ?
20)	The temperature of place rises from -3°C to 6°C . (i) By how many degrees did the temperature rise? (ii) If in the afternoon the temperature then fell by seven degrees from 6°C . What was temperature at the end of the afternoon.

Answers :-

(3) Equal scores, yes 4) (i)6 (ii)-5a (iii) 19 (6) (a) -21 (b) 92 7) - 40km

8) (i) 32 (ii) 0 (iii) 47 10) (i) -1 (ii) -3 (11) (i) 1 (ii) 85

(iii) - 405 (iv) -1 (v) -97 (vi) -10 (vii) -58 (viii) -30

12) 28 deg. C (14) (i) 720m down from original pt. (ii) 255m 15) 500hrs.

16) (i) -480 (ii) -3774 (iii) -87000 (iv) 1340 (v) (-15600)

17) 0 18) (i) 20 (ii) 20 (iii) 10

19) 2hrs. 30 min. (20) (i) 9 deg. C (ii) -1 deg C