Date: 11.10.2021

Worksheet

Autumn Holiday Homework

8- Solve the following:

i $2y-5=-11$

Soln: $\Rightarrow 2y=-11+5$

$\Rightarrow y=-6/2=-3$

$\Rightarrow y=-3$

ii $5y-3.5=10$

Soln: $\Rightarrow 5y=10+3.5$

$\Rightarrow 5y=13.5$

$\Rightarrow y=13.5/5$

$\Rightarrow y=2.7$

12- By re-arranging the given numbers, evaluate:

i $2\times487\times50$

Soln: $(2\times50)\times487$

$=100\times487$

$=48700$

ii $25\times444\times4$

Soln: $(25\times4)\times444$

$=100\times444$

$=44400$

13- Evaluate using properties:

i 548×98

Soln: $=548\times(100-2)$

$=548\times100-548\times2$

$=54800-1096$

$=53704$

Teacher's Signature

1- Fill in the blanks:

(i) 99999 , 100000

(ii) = 1000 - 999 = 1

(iii) = 4,67,306

= 467, 306

= four hundred sixty seven thousand three hundred six.

(iv) = 13,00,045

= 1,300, 045

= One million three hundred thousand forty five.

(v) 999, largest

2- Choose the correct answer.

(i) b: 1

(ii) c: 9

(iii) a: 102

(iv) a: 360

(v) a: 1439

(vi) b: 480

3. (vii) 428,190,625

4- (viii) 5544

5- (ix) Largest number = 965320

Teacher's Signature

ii 984 × 997

Soln: = 984 × (200 − 3)

= 984 × 200 − 984 × 3

= 184800 − 2772

= 182028

iii 3002 × 723

Soln: = (3000 + 2) × 723

= 3000 × 723 + 2 × 723

= 2169000 + 1446

= 2170446

14- Add :

i 259 and 214

Soln: 259

+214

473

ii −528 and −243

Soln: (−) 528

+(−) 243

− 771

iii −623 and 326

Soln: (−) 623

+ 326

− 297

Teacher's Signature

17. Find the H.C.F of :

i. 5 and 8

Soln: H.C.F of 5 = 1, 5 and 5

H.C.F of 8 = 1, 2, 4 and 8

∴, the H.C.F of 5 and 8 is 1

ii. 24 and 29

Soln: H.C.F of 24 = 1, 2, 3, 4, 6, 8, 12 and 24

H.C.F of 29 = 1, and 29

∴, the H.C.F of 24 and 29 is 1

iii. 40, 60 and 80

Soln:

2	40	60	80
5	20	30	40
2	4	6	8
2	2	3	4
2	1	3	2

H.C.F = 2 × 5 × 2 = 20

iv. ... 88

Soln:

[illegible]

Soln: 48 = 1, 2, 3, 4, 6, 12, 24, 8, 16, 24 and 48.

84 = 1, 2, 3, 4, 6, 7, 12, 14, 21, 28, 42 and 84

88 = 1, 2, 4, 8, 11, 22, 44 and 88

∴, the H.C.F is 4.

Teacher's Signature

v 12, 16 and 28

Main:

2	12, 16, 28
2	6, 8, 14
	3, 4, 7

∴ the H.C.F is 4.

1- Fill in the blanks:

(i) 99999 , 100000

(ii) = 1000 - 999 = 1

(iii) = 4,67,306

= 467, 306

= four hundred sixty seven thousand three hundred six.

(iv) = 13,00,045

= 1,300, 045

= One million three hundred thousand forty five.

(v) 999, largest

2- Choose the correct answer.

(i) b: 1

(ii) c: 9

(iii) a: 102

(iv) a: 360

(v) a: 1439

(vi) b: 480

3(vii) 428,190,625

4- (viii) 5544

5- (ix) Largest number = 965320

Teacher's Signature

6- Smallest number = 1231
Greatest number = 9876

7- F = {8, 9, 10, 11, 12, 13, 14}

9- Number of votes candidate A scored = 932567
Number of votes candidate B scored = 900235
Number of votes by how much candidate A win or lose the election = 932567 - 900235 = 32332

$$\begin{array}{r} 932567 \\ -900235 \\ \hline 32332 \end{array}$$

∴ By 32332 number of votes candidate A win the election.

10- 99999; 99998; 99997; 99996; 99995

11- 1000000; 1000001; 1000002; 1000003; 1000004

15- Subtract:

i -123 from 453

Sol^{n}:
$$\begin{array}{r} 453 \\ -(-)123 \\ \hline 576 \end{array}$$

ii -78 from -12

Sol^{n}:
$$\begin{array}{r} (-)12 \\ -(-)78 \\ \hline 66 \end{array}$$

Teacher's Signature

iii 329 from -124

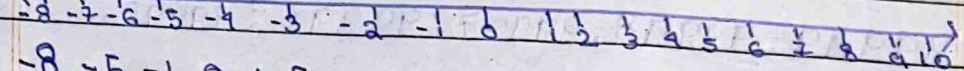
Soln: (-124)
$-(+329)$
-453

iv -222 from 0

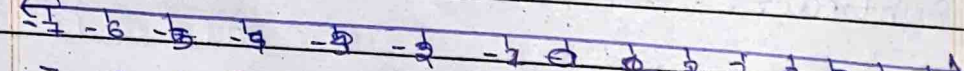
Soln: 0
$-(-222)$
222

16- In each case, arrange the given integers in ascending orders, using a number line:

i $-8, 0, -5, 5, 4, -1$

Soln: 
$-8, -5, -1, 0, 4, 5$

ii $3, -3, 4, -7, 0, -6, 2$

Soln: 
$-7, -6, -3, 0, 2, 3, 4$

18- The H.C.F and L.C.M of two numbers are 50 and 300.

One number = 150

Other number: $\frac{\text{Product of H.C.F and L.C.M}}{\text{One number}}$

$= \frac{50 \times 300}{150} = \frac{15000}{150} = 100$

Teacher's Signature

19- Product of two numbers is 432
Their L.C.M = 72
Their H.C.F = $\frac{\text{Their product}}{\text{Their L.C.M}} = \frac{432}{72} = 6$

20- Write the degree of each of the following polynomials:

i $x + x^2$
Soln: Here the degree of polynomial is 2.

ii $5x^2 - 7x + 2$
Soln: Here the degree of polynomial is 2.

iii $x^3 - x^8 + x^{10}$
Soln: Here the degree of polynomial is 10.

iv $1 - 100x^2$
Soln: Here the degree of polynomial is 2.

21- State the numeral coefficient of the following monomials:

i $5xy$
Soln: The numeral coefficient of $5xy$ is 5.

ii abc
Soln: The numeral coefficient of abc is 1.

$5pqr$
Soln: The numeral coefficient of $5pqr$ is 5.

iii $-2x/y$
Soln: The numeral coefficient of $-2x/y$ is -2.

Teacher's Signature

22- 8300023 = 8300000 + 23

= 23 × (1000000 + 1) = 23 × 1000001

Clearly, 8300023 is divisible by 23.

23- i) 11000 + 11

= 11 × (10000 + 1) = 11 × 10000

Clearly, 11011 is divisible by 11.

ii) 110011 = 110000 + 11

= 11 × (10000 + 1) = 11 × 10001

Clearly, 11011 is divisible by 11

iii) 110000011 = 110000000 + 11

= 11 × (10000000 + 1) = 11 × 10000001

24- i) 1608 = 1600 + 8

= 8 × (1000 + 1) = 8 × 1001

Clearly, 1608 is divisible by 8.

ii) 56008 = 56000 + 8

= 8 × (56000 + 1) = 8 × 56001

Clearly, 56008 is divisible by 8.

iii) 240008 = 240000 + 8

= 8 × (240000 + 1) = 8 × 200001

Clearly, 240008 is divisible by 8.

25- 352 and 496

26- 9990 and 0

27- 5918, 68717, 3882, 10857

28- i) 64 M 3

Soln: The given number = 64 M 3

Sum of its digits = 6 + 4 + 3 = 13

The number next to 13 which is divisible 3 is 15

Required smallest number = 15 − 13 = 2

ii) 46 M 46

Soln: The given number = 46 M 46

Then sum of its digits = 4 + 6 + 4 + 6 = 20

The number next to 20 which is divisible by

Teacher's Signature

by 3 is 21.
Required smallest number = 21-20 = 1

(ii) 27M53

Soln. The given number = 27M53
Required smallest number = 18-17=1
Sum of its digits = 2+7+5+3 = 17
The number next to 17 which is divisible by 18.

29- Given,
Cost of pencils = Rs. 2
Cost of one fountain pen = Rs. 2
So,
Cost of x pencils = Rs. 2x
Cost of y fountainpens = Rs. 15y
Thus,
Cost of x pencils and y fountain pens = Rs. (2x+15y).

30- Let,
The number be x.
The number multiplied by 5 = 5x
The resultant added to 6 = 5x+6
The resultant subtracted from y = 5x+6-y
Thus,
The resultant = 5x+6-y.

31- Let the required number be x.
Given:

$$\frac{1}{4}x + \frac{2}{7}x = 135$$

$$\Rightarrow \frac{7x + 8x}{28} = 135$$

$$\Rightarrow \frac{15x}{28} = 135 \text{ and } x = 135 \times \frac{15}{28} = 252$$

32- Given:
Number of rooms on the first floor = x
Twice the number of rooms on the first floor = 2x
12 less than the number of rooms on the first floor
= 2x - 12
∴ the number of rooms on the ground floor of a building = 12 less than the number of rooms on the first floor = 2x - 12

33- Let the number be x.
The new number increased by 12 = x + 15
The new number (x+15) multiplied by 5 = 5(x+15)
Given: $5(x+15) = 95 \Rightarrow 5x + 75 = 95$
$\Rightarrow 5x = 95 - 75 = 20$
$\Rightarrow x = \frac{20}{5} = 4$

34- Let the age of the son = x years.
∴ the age of the man is 27 years more than the age of the son and his father
∴ The age of the man = (x+27) years
Given: The sum of the ages of the man and his son = 47 years
∴ $(x+27) + x = 47$
$\Rightarrow x + 27 + x = 47$ and $2x + 27 = 47$
$\Rightarrow 2x = 47 - 27 = 20$ and $x = \frac{20}{2} = 10$
∴ The age of the son = x years = 10 years
And the age of his father = (x+27) years = (10+27) years = 37 years

35- Let the number be x
The new number increased by 26 = x + 26
The new number (x+26) divided by 3 = $\frac{x+26}{3}$
Given: $\frac{x+26}{3} = 18 \Rightarrow x + 26 = 54$
$\Rightarrow x = 54 - 26$

Teacher's Signature

Given: $\frac{x+26}{3} = 18 \Rightarrow x+26 = 18 \times 3$

$\Rightarrow x+26 = 54$

$\Rightarrow x = 54 - 26$

$\Rightarrow x = 28$

∴, the required number is 28

36 i) Infinite

ii) finite

iii) infinite

iv) finite

v) finite

vi) infinite

37, i) False

ii) False

iii) True

iv) True

v) True

38, i) Disjoint set

ii) Overlapping set

iii) Overlapping set

iv) Overlapping set

v) Overlapping set

39, i $A = \{0, 1, 2, 4\}$ i.e. $n(A) = 4$

ii $B = \{-3, -1, 1, 3, 5, 7\}$ i.e. $n(B) = 6$

iii $C = \{\}$ i.e. $n(C) = 0$

iv $D = \{3, 2, 2, 1, 3, 1, 2\}$ i.e $n(D) = 3$

v $E = \{16, 17, 18, 19\}$ i.e $n(E) = 4$

40- 1

41- 1