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PRACTICE PAPER 04 (2023-24)

FRACTIONS, DECIMALS AND DATA HANDLINGS

(ANSWERS)

SUBJECT: MATHEMATICS **MAX. MARKS : 40**

CLASS : VI **DURATION : 1½ hr**

General Instructions:

(i). **All** questions are compulsory.

(ii). This question paper contains 2**0** questions divided into five Sections A, B, C, D and E.

(iii). **Section A** comprises of **6 MCQs** of **1 mark** each. **Section B** comprises of **1 CCT question** of **4 marks** each which contains **4 MCQs**. **Section C** comprises of 3 questions of **2 marks** each. **Section D** comprises of 4 questions of **3 marks** each and **Section E** comprises of 3 questions of **4 marks** each.

SECTION – A

Questions 1 to 6 carry 1 mark each.

1. If $\frac{5}{8}=\frac{20}{p}$, then value of p is

(a) 23 (b) 2 (c) 32 (d) 16

Ans: (c) 32

Consider the given fraction, $\frac{5}{8}=\frac{20}{p} \Rightarrow p = 20 \times (8/5)$

$\Rightarrow p = 4 \times 8 \Rightarrow p = 32$

2. 0. 023 lies between

(a) 0.2 and 0.3 (b) 0.02 and 0.03 (c) 0.03 and 0.029 (d) 0.026 and 0.024

Ans: (b) 0.02 and 0.03

3. 15.8 – 6.73 is equal to

(a) 8.07 (b) 9.07 (c) 9.13 (d) 9.25

Ans: (b) 9.07

4. The mixed fraction $5\frac{1}{7}$ can be expressed as

(a) 36/7 (b)39/7 (c) 33/4 (d) 39/4

Ans: (a) 36/7

$5\frac{1}{7} = (35 + 1)/7 = 36/7$

5. The choices of the fruits of 42 students in a class are as follows:

A, O, B, M, A, G, B, G, A, G, B, M, A, G, M, A,
B, G, M, B, A, O, M, O, G, B, O, M, G, A, A, B,
M, O, M, G, B, A, M, O, M, O,

where A, B, G, M and O stand for the fruits Apple, Banana, Grapes, Mango and Orange, respectively. Which two fruits are liked by an equal number of students?

(a) A and M (b) M and B (c) B and O (d) B and G

Ans: (d) B and G

By observing the choices of the fruits of 42 students in a class Bananas (B) and Grapes (G) are liked by an equal number of students i.e. 8 students each.

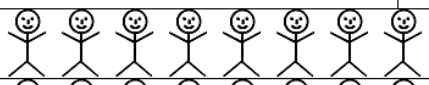
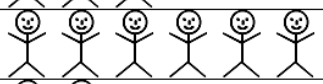
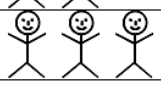
6. The marks (out of 10) obtained by 28 students in a Mathematics test are listed below:
8, 1, 2, 6, 5, 5, 5, 0, 1, 9, 7, 8, 0, 5, 8, 3, 0, 8, 10, 10, 3, 4, 8, 7, 8, 9, 2, 0
The number of students who obtained marks more than or equal to 5 is
(a) 13 (b) 15 (c) 16 (d) 17
Ans: (d) 17
First, we have to arrange the marks (out of 10) obtained by 28 students in a Mathematics test.
0, 0, 0, 0, 1, 1, 2, 2, 3, 3, 4, 5, 5, 5, 5, 6, 7, 7, 8, 8, 8, 8, 8, 8, 9, 9, 10, 10.
The number of students who obtained marks more than or equal to 5 is 17.

SECTION – B(CCT Questions)

Questions 7 to 10 carry 1 mark each.

CCT Question

The colours of fridges preferred by people living in a locality are shown by the following pictograph. Read the table and answer the questions given bellow (Q7-Q13):

Colours	Number of Peoples	= 10 People
Blue		
Red		
Green		
Yellow		
White		
Black		

7. Find the number of people preferring blue colour.
(a) 20 (b) 80 (c) 50 (d) 10
Ans: (b) 80

8. How many people liked red colour?
(a) 120 (b) 80 (c) 50 (d) 110
Ans: (d) 110

9. Find the number of people preferring white colour.
(a) 20 (b) 80 (c) 50 (d) 10
Ans: (a) 20

10. Find the number of people preferring yellow colour.
(a) 20 (b) 80 (c) 60 (d) 50
Ans: (c) 60

SECTION – C

Questions 11 to 13 carry 2 marks each.

11. Urmila's school is at a distance of 5 km 350 m from her house. She travels 1 km 70 m on foot and the rest by bus. How much distance does she travel by bus?
Ans: Total distance of school from the house = 5.350 km
Distance travelled on foot = 1.070 km

Therefore, distance travelled by bus = 5.350 km – 1.070 km
= 4.280 km
Thus, distance travelled by bus = 4.280 km or 4 km 280 m

12. Following is the choice of sweets of 30 students of Class VI.
Ladoo, Barfi, Ladoo, Jalebi, Ladoo, Rasgulla, Jalebi, Ladoo, Barfi, Rasgulla, Ladoo, Jalebi, Jalebi, Rasgulla, Ladoo, Rasgulla, Jalebi, Ladoo, Rasgulla, Ladoo, Ladoo, Barfi, Rasgulla, Rasgulla, Jalebi, Rasgulla, Ladoo, Rasgulla, Jalebi, Ladoo.
Arrange the names of sweets in a table using tally marks.
Ans:

Sweets	Tally Marks	No. of students
Ladoo	𝍸 𝍸 I	11
Barfi	III	3
Jalebi	𝍸 II	7
Rasgulla	𝍸 IIII	9
		30

13. Subtract: (a) $\frac{2}{9}$ from $\frac{7}{9}$ (b) $6\frac{2}{7}$ from $11\frac{4}{7}$

Ans:

(a) $\frac{7}{9}-\frac{2}{9}=\frac{7-2}{9}=\mathbf{\frac{5}{9}}$.

(b) $11\frac{4}{7}-6\frac{2}{7}=\frac{81}{7}-\frac{44}{7}=\frac{81-44}{7}=\frac{37}{7}=\mathbf{5\frac{2}{7}}$.

SECTION – D

Questions 14 to 17 carry 3 marks each.

14. A survey was carried out on 30 students of class VI in a school. Data about the different modes of transport used by them to travel to school was displayed as pictograph.

Modes of travelling	Number of students ☺ - 1 Student
Private car	☺ ☺ ☺ ☺
Public bus	☺ ☺ ☺ ☺ ☺
School bus	☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺
Cycle	☺ ☺ ☺
Walking	☺ ☺ ☺ ☺ ☺ ☺ ☺

(a) Find the number of students coming by private car.
(b) Which is the most popular way.
(c) Which is used by only three students.
Ans: (a) The number of students coming by private car is 4.

(b) Maximum number of students use the school bus. This is the most popular way.
(c) Cycle is used by only three students.

15. Ramu can mow a field in 3 days. What fraction of it can he mow in 1 day? Mahipal can mow the same field in 4 days. What fraction can Mahipal mow in 1 day? If Ramu and Mahipal work together, what fraction do they mow in 1 day?
Ans: Ramu can mow the field in 3 days.
So, he can mow of the field in 1/3 day.
Mahipal can mow this field in 4 days
So, he can mow of the field in 1/4 day.
Part of the field mowed in 1 day, if they work together $= \frac{1}{3} + \frac{1}{4} = \frac{7}{12}$
Thus, Ramu and Mahipal can mow 7/12 field, if they work together.

16. Ravi purchased 5 kg 400 g rice, 2 kg 20 g sugar and 10 kg 850g flour. Find the total weight of his purchases.
Ans: Weight of rice purchased by Ravi = 5 kg 400 g
= 5 kg + 0.4 kg = 5.4 kg
Weight of sugar purchased by Ravi = 2 kg 20 g
= 2 kg + 0.02 kg = 2.02 kg
Weight of flour purchased by Ravi = 10 kg 850 g
= 10 kg + 0.85 kg = 10.85 kg
We know that the total weight of Ravi's purchases = Weight of rice purchased by Ravi + Weight of sugar purchased by Ravi + Weight of flour purchased by Ravi
= 5.4 kg + 2.002 kg + 10.85 kg
= 18.270 kg
Therefore, the total weight of Ravi's purchases is 18.270 kg.

17. Add $2\frac{1}{2} + 4\frac{2}{3} + 1\frac{3}{4}$ and write the sum as a mixed fraction.
Ans:

$$2\frac{1}{2} + 4\frac{2}{3} + 1\frac{3}{4} = \frac{5}{2} + \frac{14}{3} + \frac{7}{4} \quad \text{(Writing in improper form)}$$

$$= \frac{5\times 6}{2\times 6} + \frac{14\times 4}{3\times 4} + \frac{7\times 3}{4\times 3} \quad (\because \text{LCM of } 2, 3, 4 = 12)$$

$$= \frac{30}{12} + \frac{56}{12} + \frac{21}{12}$$

$$= \frac{30+56+21}{12} = \frac{107}{12} = 8\frac{11}{12}$$

SECTION – E

Questions 18 to 20 carry 4 marks each.

18. Catherine threw a dice 40 times and noted the number appearing each time as shown below :

1	3	5	6	6	3	5	4	1	6
2	5	3	4	6	1	5	5	6	1
1	2	2	3	5	2	4	5	5	6
5	1	6	2	3	5	2	4	1	5

Make a table and enter the data using tally marks. Find the number that appeared.

(a) The minimum number of times (b) The maximum number of times
(c) Find those numbers that appear an equal number of times.
Ans:

Marks	Tally Marks	Tally Marks
1	𝍸 II	7
2	𝍸 I	6
3	𝍸	5
4	IIII	4
5	𝍸 𝍸 I	11
6	𝍸 II	7

(a) The number that appeared the minimum number of times = 4
(b) The number that appeared the maximum number of times = 5
(c) The numbers 1 and 6 appeared an equal number of times, that is 7.

19. Re-arrange the given fractions in ascending order: $\frac{7}{15}, \frac{11}{21}, \frac{13}{35}$

Ans:

The fractions are $\frac{7}{15}, \frac{11}{21}$ and $\frac{13}{35}$.

LCM of 15, 21, 35 = $3 \times 5 \times 7 = 105$

$\therefore \quad \frac{7}{15} = \frac{7\times7}{15\times7} = \frac{49}{105}; \qquad \frac{11}{21} = \frac{11\times5}{21\times5} = \frac{55}{105}; \qquad \frac{13}{35} = \frac{13\times3}{35\times3} = \frac{39}{105}$

$\because \quad \frac{49}{105}, \frac{55}{105}, \frac{39}{105}$ are like fractions.

$\therefore$ Comparison is made on the basis of numerators. Arranged in ascending order they are $\frac{39}{105}, \frac{49}{105}, \frac{55}{105}$ or $\frac{13}{35}, \frac{7}{15}, \frac{11}{21}$.

20. (i) Express as km using decimals.
(a) 8 m (b) 88 m (c) 8888 m (d) 70 km 5 m
(ii) Express as kg using decimals.
(a) 2 g (b) 100 g (c) 3750 g (d) 5 kg 8 g
Ans: (i) We know that 1 km = 1000 m. To convert m into km, we will divide by 1000 and express it as decimals.
(a) 8 m = 8 / 1000 = 0.008 km
(b) 88 m = 88 / 1000 = 0.088 km
(c) 8888 m = 8888 / 1000 = 8.888 km
(d) 70 km 5 m = (70 × 1000 + 5) / 1000 = 70005 / 1000 = 70.005 km
(ii) We know that 1kg = 1000 g. Therefore, to convert g into kg we divide by 1000 and express it as decimals.
(a) 2 g = 2/1000 = 0.002 kg
(b) 100 g = 100 / 1000 = 0.1 kg
(c) 3750 g = 3750/ 1000 = 3.750 kg

(d) 5 kg 8 g = (5 × 1000 + 8) / 1000 = 5008 / 1000 = 5.008 kg