CLASS 6 MATHEMATICS | SAMPLE QUESTION PAPER | YEARLY EXAMINATION

Time: 3 hrs   Max: 80 marks

General Instruction:

- Section A consists of 4 questions carrying 1 mark each.
- Section B consists of 16 questions carrying 2 marks each.
- Section C consists of 12 questions carrying 3 marks each.
- Section D consists of 2 questions carrying 4 marks each.

SECTION A
1. The succeeding number of -2 is ------------
2. The mixed fractional form of $\frac{5}{2}$ is ----------
3. 0.01 is equal to----------------
4. 2 more than thrice a number y is --------------

SECTION B

5. Reduce to the lowest terms:
   a) $\frac{48}{60}$
   b) $\frac{12}{52}$
6. Raju exercised for $\frac{2}{3}$ of an hour, while Rani exercised $\frac{3}{5}$ of an hour. Who exercised for a longer time?
7. Write each of the following as decimals.
   a) $\frac{3}{10} + \frac{5}{100} + \frac{6}{1000}$
   b) $400 + 20 + 5 + \frac{4}{100} + \frac{3}{1000}$
8. Sonu spent Rs 36.75 for notebook and Rs 4.75 for pencil. Find the total amount spent by Sonu?
9. Nandana scores 78 marks in mathematics and y marks in English. What is her total score in Mathematics and English?
10. Out of 30 students in a class, 16 are boys and the remaining are girls. Find the ratio of the number of girls to the number of boys?
11. Find the perimeter and area of a rectangle whose length and breadth are 35 cm and 15 cm respec tively.
12. Find the value of -4 – 5- (-20)
13. The size of shoes of students in Class VI are recorded in the manner shown below. Prepare a frequency table.

5	4	7	5	6	7	6	5	6	6	5
4	5	6	8	7	4	6	5	6	4	6
5	7	6	7	5	7	6	4	8	7	

14. The sum of two numbers is 100. If one of them is 75.50, find the other?
15. Subtract the sum of -250 and -320 from -690.
16. Write the number name and expanded form of 9.123
17. A long piece of wire of length 60 cm is bend to form an equilateral triangle. What will be the length of each side of the triangle?
18. Divide Rs 250 among Diya and Jiya in the ratio 2:3.
19. Check whether the following are in proportion
    a) 15: 45, 40:120
    b) 8: 9, 24:27
20. If the cost of 7m of cloth is Rs 294, find the cost of 5m of cloth?

SECTION C
21. Find the value of
    a) 120 – (-20) + 40
    b) (-15) + (-20) + 20
    c) (-23)+(-10)+(-13)
22. Add $2\frac{2}{3} + 3\frac{3}{4} + 4\frac{1}{4}$
23. Amna bought $2\frac{1}{2}$ kg of apples and Sahla bought $2\frac{2}{3}$ kg of apples. Who bought less number of apples?
24. Write algebraic expressions for the following:
    a) 3 added to 4 times of y
    b) 5 taken away from thrice of k.
    c) 4 multiplied by the sum of x and y.
25. Cost of 5 kg of rice is Rs 150.
    a) What will be the cost of 7 kg of Rice?
    b) What quantity of Rice can be purchased with Rs 300?
26. Find the number of tiles needed to fix in a room of length 6m and breadth 4 m if the size of the square tile is 20 cm.
27. Ramu purchased 4 kg 300 g apples, 2 kg 30g oranges and 6 kg 200g grapes. Find the total weight of his purchases?
28. Sonia drives 75.75 km in the morning and 68.56 km in the evening. How many kilometers did she drive in the day?
29. The following are the number of electric bulbs purchased for a lodging house during the first months of a year. Represent the details by a pictograph.

Months	Number of bulbs
January	20
February	26
March	30
April	34

30. Draw any line segment PQ. Take any point R not on it. Through R, draw a perpendicular to PQ.

SECTION D

31. The perimeter of a rectangle is 130 cm. If the breadth of the rectangle is 30 cm, find its length. Also find the area of the rectangle?

32. Draw an angle of measure 153° and divide it into four equal parts.

ANSWERS:

1. -1

2. $2\frac{1}{2}$

3. $\frac{1}{100}$

4. 2 + 3y

5. a) $\frac{48}{60} \div \frac{12}{12} = \frac{4}{5}$ = 4:5

   b) $\frac{12}{52} \div \frac{4}{4} = \frac{3}{13}$ 3:13

6. Raju exercised $\frac{2}{3}$ of an hour.

i.e, $\frac{2}{3} \times 60$ = 40 minutes.

Rani exercised $\frac{3}{5}$ of an hour.

.e, $\frac{3}{5} \times 60$ = 36 minutes.

So Raju exercised for a longertime.

7. a) 0.356

b) 425.043

8. The amount spend for a notebook = Rs 36.75

The amount spend for a pencil = Rs 4.75

Total amount append = 36.75 + 4.75 = Rs 41.50

9. Total score in Mathematics and English = 78 + y

10. Total number of students = 30

Number of boys = 16

Number of girls = 30 – 16 = 14

Ratio of number of girls to number of boys = 14:16 = $\frac{14}{16} \div \frac{2}{2} = \frac{7}{8}$ = 7:8

11. Given length = 35 cm

Breadth = 15 cm

Perimeter of a rectangle = 2(l + b) = 2 (35 + 15) = 2 × 50 = 100 cm

Area of a rectangle = l x b = 35 x 15 = 525 square cm

12. -4 -5 – (-20) = -4 -5 + 20 = -9 + 20 = 11

13.

Size of shoes	Tally mark	Number of students
4	ℾℍℒ	5
5	ℾℍ III	8
6	ℾℍ ℾℍ	10
7	ℾℍ II	7
8	II	2

14. Sum of two numbers = 100

One of the numbers = 75.50

Other number = 100 – 75.50 = 24.50

15. Sum of -250 and -320 = -570

Now -690 – (-570) = -690 + 570 = -120

16. Number name of 9.123 is Nine point one two three.

Expanded form is 9 + $\frac{1}{10}$ + $\frac{2}{100}$ + $\frac{3}{1000}$.

17. Given perimeter of an equilateral triangle = 60 cm

Length of each side = 60 ÷3 = 20 cm

18. Diya will get $250 \times \frac{2}{5} = 50 \times 2 = $ Rs 100

Jiya will get $250 \times \frac{3}{5} = 50 \times 3 = $ Rs 150

19. a) $15:45 = \frac{15}{45} \div \frac{15}{15} = \frac{1}{3} = 1:3$

$40:120 = \frac{40}{120} \div \frac{40}{40} = \frac{1}{3} = 1:3$

So these ratios are in proportion.

b) 8:9

$24:27 = \frac{24}{27} \div \frac{3}{3} = \frac{8}{9} = 8:9$

So these ratios are in proportion.

20. Cost of 7m of cloth = Rs 294

Cost of 1m of cloth = 294 ÷7 = Rs 42

Cost of 5m of cloth = 42 x 5 = Rs 210.

21. a) 120 – (-20)+40 = 120 + 20 + 40 = 180

b) (-15) + (-20) + 20 = -35 + 20 = -15

c) (-23) + (-10) + (-13) = -46

22. First convert mixed fraction into improper fractions.

$2\frac{2}{3} = \frac{2 \times 3 + 2}{3} = \frac{8}{3}$

$3\frac{3}{4} = \frac{3 \times 4 + 3}{4} = \frac{15}{4}$

$4\frac{1}{4} = \frac{4 \times 4 + 1}{4} = \frac{17}{4}$

Now, $2\frac{2}{3} + 3\frac{3}{4} + 4\frac{1}{4} = \frac{8}{3} + \frac{15}{4} + \frac{17}{4}$

Now the LCM of 3 and 4 are 12.

The equivalent fraction of $\frac{8}{3}$ are $\frac{32}{12}$.

The equivalent fraction of $\frac{15}{4}$ are $\frac{45}{12}$.

The equivalent fraction of $\frac{17}{4}$ are $\frac{51}{12}$.

Sum = $\frac{32}{12} + \frac{45}{12} + \frac{51}{12} = \frac{128}{12}$

23. Amna bought $2\frac{1}{2}$ kg of apples.

Sahla bought $2\frac{2}{3}$ kg of apples.

$2\frac{1}{2} = \frac{2 \times 2 + 1}{2} = \frac{5}{2}$

$2\frac{2}{3} = \frac{2 \times 3 + 2}{3} = \frac{8}{3}$

Equivalent fractions of $\frac{5}{2}$ are $\frac{10}{4}, \frac{15}{6}, \frac{20}{8}$...................

Equivalent fractions of $\frac{8}{3}$ are $\frac{16}{6}, \frac{24}{9}, \frac{32}{12}$................

Here like fractions are $\frac{15}{6}$ and $\frac{16}{6}$.

Since $\frac{16}{6} > \frac{15}{6}$, $2\frac{2}{3} > 2\frac{1}{2}$.

So Amna bought less number of apples.

24. a) 3+4y

b) 3k – 5

c) 4(x+y)

25.a) Cost of 5 kg of rice =Rs 150

Cost of 1 kg of rice = 150 ÷5 = Rs 30

Cost of 7 kg of rice = 7 x 30 =Rs 210

b)10 kg of rice can be purchased with Rs 300

26. Area of the room = 6 x 4 = 24 square m.

= 240000 square cm
Area of square tile of length 20 cm = 20 x 20 = 400 square cm
Number of tiles required = 240000 ÷ 400 = 600 tiles.
27. The weight of apple purchased by Ramu = 4 kg 300g = 4.300 kg
The weight of Orange purchased = 2 kg 30 g = 2.030 kg
The weight of grapes purchased = 6 kg 200 g = 6.200 kg
Total weight of his purchases = 4.300 + 2.030 + 6.200 = 12.530 kg
28. Distance travelled in the morning = 75.75 km
Distance travelled in the evening = 68.56 km

Therefore, distance travelled in the day = 75.75 + 68.56 = 144.31 km

29. Do yourself.

30. Do yourself.

31. Given perimeter of a rectangle = 130 cm

Breadth = 30 cm

$2(l+30) = 130$

$2l + 60 = 130$

$2l = 130 - 60 = 70$, $l = 70 \div 2 = 35cm$

length = 35 cm

Area = length x breadth = 35 x 30 = 1050 square cm

32. Do the construction

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