KENDRIYA VIDYALAYA SANGATHAN, HYDERABAD REGION
SAMPLE PAPER 03 FOR HALF YEARLY EXAM (2017-18)

SUBJECT: MATHEMATICS

<u>BLUE PRINT FOR HALF YEARLY EXAM: CLASS VIII</u>

Unit/Topic	VSA (1 mark)	Short answer (2 marks)	Short answer (3 marks)	Long answer (4 marks)	Total
Rational Numbers	1(1)	1(2)	1(3)	1(4)	**4(10)**
Linear equations in one variable	1(1)	--	2(6)	1(4)	**4(11)**
Understanding Quadrilaterals	1(1)	1(2)	1(3)	1(4)	**4(10)**
Practical Geometry	--	--	1(3)	1(4)	**2(7)**
Data Handlings	--	1(2)	1(3)	1(4)	**3(9)**
Squares and Square Roots	1(1)	--	2(6)	1(4)	**4(11)**
Cubes and Cube Roots	1(1)	1(2)	1(3)	1(4)	**3(9)**
Comparing Quantities	1(1)	2(4)	1(3)	1(4)	**5(12)**
Total	**6(6)**	**6(12)**	**10(30)**	**8(32)**	**30(80)**

MARKING SCHEME FOR HALF YEARLY EXAM

SECTION	MARKS	NO. OF QUESTIONS	TOTAL
VSA	1	6	08
SA – I	2	6	12
SA – II	3	10	30
LA	4	8	32
GRAND TOTAL			**80**

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SUBJECT: MATHEMATICS	**MAX. MARKS : 80**
CLASS : VIII	**DURATION : 3 HRS**

General Instructions:
(i).   **All** questions are compulsory.
(ii). This question paper contains **30** questions divided into four Sections A, B, C and D.
(iii). **Section A** comprises of 6 questions of **1 mark** each. **Section B** comprises of 6 questions of **2 marks** each. **Section C** comprises of 10 questions of **3 marks** each and **Section D** comprises of 8 questions of **4 marks** each.
(iv). Use of Calculators is not permitted

SECTION – A

1. Write the additive inverse of $\dfrac{4}{-5}$.

2. Solve: $7x - 9 = 16$.

3. Find x in the adjoining figure:

4. Find the square of the number 42.

5. A football team won 10 matches out of the total number of matches they played. If their win percentage was 40, then how many matches did they play in all?

6. Find the cube of 0.3.
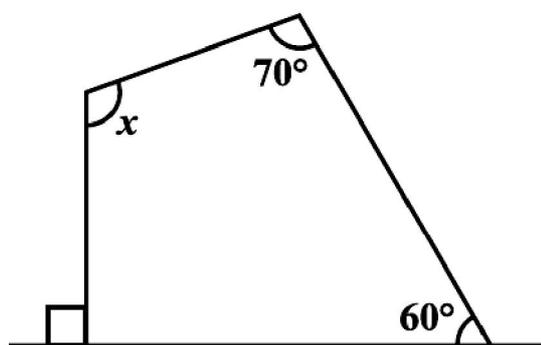
SECTION – B

7. Find two rational numbers between $\dfrac{-3}{2}$ and $\dfrac{5}{3}$.

8. How many sides does a regular polygon have if the measure of an exterior angle is 24°?

9. Find the cube root of 10648 by prime factorisation method.

10. A man got a 10% increase in his salary. If his new salary is Rs 1,54,000, find his original salary.

11. A watch worth Rs 5400 is offered for sale at Rs 4,500. What per cent discount is offered during the sale?

12. The following marks (out of 50) obtained in Mathematics by 60 students of Class VIII:

    21, 10, 30, 22, 33, 5, 37, 12, 25, 42, 15, 39, 26, 32, 18, 27, 28, 19, 29, 35, 31, 24, 36,
    18, 20, 38, 22, 44, 16, 24, 10, 27, 39, 28, 49, 29, 32, 23, 31, 21, 34, 22, 23, 36, 24,
    36, 33, 47, 48, 50, 39, 20, 7, 16, 36, 45, 47, 30, 22, 17.

    Using tally marks make a frequency table with intervals as 0–10, 20–30 and so on.

SECTION – C

13. Represent these numbers on the number line: $(i)\dfrac{5}{6}$ $(ii)\dfrac{-7}{4}$ $(iii)\dfrac{2}{7}$

14. Construct a quadrilateral JUMP where JU = 3.5 cm, UM = 4 cm, MP = 5 cm, PJ = 4.5 cm and PU = 6.5 cm

15. Find CI on Rs 12600 for 2 years at 10% per annum compounded annually.

16. Solve: $\dfrac{7y+4}{y+2}=\dfrac{-4}{3}$

17. Find the smallest number by which 704 must be divided to obtain a perfect cube.

18. In a parallelogram RUNS, (see below Figure), find the values of x and y.
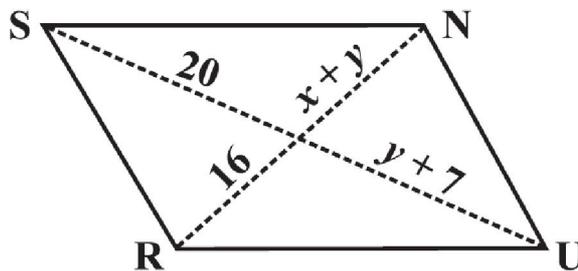
19. Observe the histogram (see below Figure) and answer the questions given below.
   (i) What information is being given by the histogram?
   (ii) Which group contains maximum students and minimum students?
   (iii) How many students have score 20 marks and more?
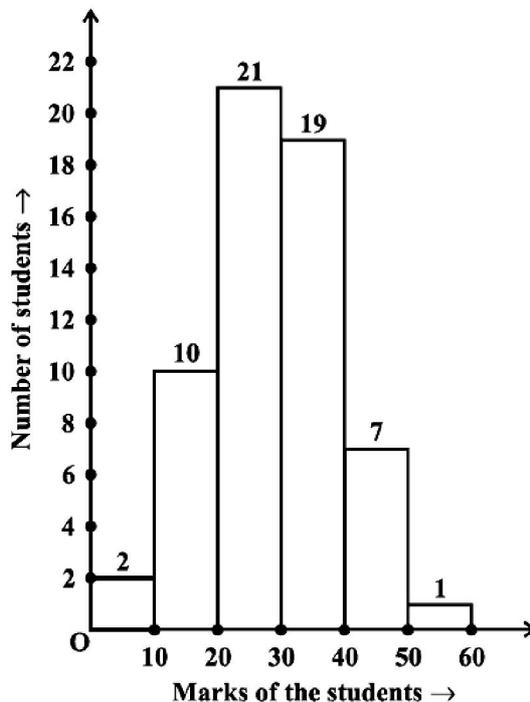
20. A gardener has 1000 plants. He wants to plant these in such a way that the number of rows and the number of columns remain same. Find the minimum number of plants he needs more for this.

21. Find the smallest square number that is divisible by each of the numbers 8, 15 and 20.

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22. Solve: $4(3p + 2) - 5(6p - 1) = 2(p - 8) - 6(7p - 4)$

SECTION – D

23. One of the two digits of a two digit number is three times the other digit. If you interchange the digits of this two-digit number and add the resulting number to the original number, you get 88. What is the original number?

24. Find the square root of the following by long division method.
(a) 1369 (b) 5625

25. Three numbers are in the ratio 2:3:4. The sum of their cubes is 0.334125. Find the numbers.

26. Construct a quadrilateral TRUE where TR = 3.5 cm, RU = 3 cm, UE = 4 cm, $\angle R = 75°$ and $\angle U = 120°$

27. In the given figure, RICE is a rhombus. Find x, y, z. Hence, find the perimeter of the rhombus.
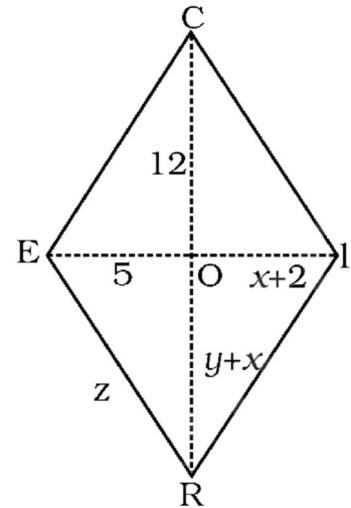
28. Find the population of a city after 2 years, which is at present 12 lakhs, if the rate of increase is 4%. Write any two effects of high populations?

29. Shalini has to cut out circles of diameter $1\frac{1}{4}$ cm from an aluminium strip of dimensions $8\frac{3}{4}$ cm by $1\frac{1}{4}$ cm. How many full circles can Shalini cut? Also calculate the wastage of the aluminium strip.

30. On a particular day, the sales (in rupees) of different items of a baker's shop are given below.

Ordinary bread	320
Fruit bread	80
Cakes and pastries	160
Biscuits	120
Others	40
Total	**720**

Draw a pie chart for this data.

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