KENDRIYA VIDYALAYA GACHIBOWLI, GPRA CAMPUS, HYD–32
SAMPLE PAPER 03 FOR SESSION ENDING EXAM (2018–19)

SUBJECT: MATHEMATICS

BLUE PRINT FOR SESSION ENDING EXAM: CLASS VIII

Unit/Topic	VSA (1 mark)	SA-I (2 marks)	SA-II (3 marks)	LA (4 marks)	Total
Linear equations in one variable	1(1)	--	--	1(4)	**2(5)**
Understanding Quadrilaterals	1(1)	1(2)	1(3)	--	**3(6)**
Data Handlings	--	--	1(3)	1(4)	**2(7)**
Squares and Square Roots	1(1)	1(2)	1(3)	--	**3(6)**
Algebraic Expression	1(1)	--	1(3)	1(4)	**3(8)**
Visualizing Solid Shapes	1(1)	1(2)	1(3)	--	**3(6)**
Mensuration	--	--	2(6)	1(4)	**3(10)**
Exponents and Powers	1(1)	1(2)	1(3)	1(4)	**4(10)**
Direct and Inverse Proportion	--	1(2)	--	1(4)	**2(6)**
Factorisation	--	1(2)	1(3)	1(4)	**3(9)**
Introduction to Graphs	--	--	--	1(4)	**1(4)**
Playing with Numbers	--	--	1(3)	--	**1(3)**
Total	**6(6)**	**6(12)**	**10(30)**	**8(32)**	**30(80)**

Note:
1) 30% i.e. 24 marks of 1st term syllabus covering significant topics/chapters have taken as per CBSE guidelines.
2) Numerals inside the bracket indicate marks and outside the bracket indicate the number of questions

MARKING SCHEME FOR SESSION ENDING EXAM

SECTION	MARKS	NO. OF QUESTIONS	TOTAL
VSA	1	6	06
SA – I	2	6	12
SA – II	3	10	30
LA	4	8	32
GRAND TOTAL			**80**

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SAMPLE PAPER 03 FOR SESSION ENDING EXAM (2018–19)

SUBJECT: MATHEMATICS **MAX. MARKS : 80**
CLASS : VIII **DURATION : 2½HRS**

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.
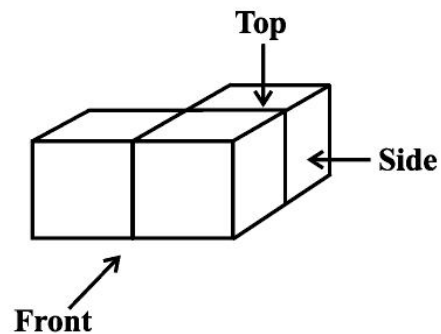(iv). Use of Calculators is not permitted

SECTION – A

1. The angles of a quadrilateral are in the ratio 1 : 2 : 3 : 4. Find the smallest angle

2. Find the square of the number 42.

3. If $3x – 4 (64 – x) = 10$, then find the value of x.

4. Find the product : $(a^2 – 9)4a$

5. Find the value of $\left(2^{-1} – 4^{-1}\right)^2$

**6.** Draw the top view of the given solid:

SECTION – B

7. 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.

8. Two adjacent angles of a parallelogram are in the ratio 1 : 3. Find its angles.

9. 6 pipes are required to fill a tank in 1 hour 20 minutes. How long will it take if only 5 pipes of the same type are used?

10. Find m so that $(–2)^{m + 1} \times (–2)^3 = (–2)^9$

11. Factorise: $5y^2 – 20y – 8z + 2yz$

12. Using Euler's formula find the unknown.

Faces	?	20
Vertices	6	12
Edges	12	?

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13. In parallelogram FIST, find $\angle$ SFT, $\angle$ OST and $\angle$ STO.
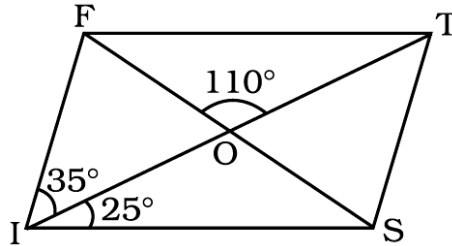
14. Consider the following marks (out of 50) obtained in Mathematics by 60 students of Class VIII:

    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.

Construct a frequency distribution table for the data using intervals 0-10, 10-20 and so on.

15. Using prime factorisation, find the cube root of 5832.

16. Show that: $\left(\dfrac{4}{3}m - \dfrac{3}{4}n\right)^2 + 2mn = \dfrac{16}{9}m^2 + \dfrac{9}{16}n^2$

17. In a building there are 24 cylindrical pillars. The radius of each pillar is 28 cm and height is 4 m. Find the total cost of painting the curved surface area of all pillars at the rate of Rs 8 per m^2.

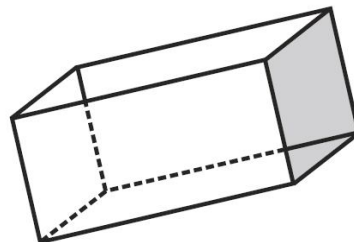**18.** Simplify: $\dfrac{25 \times t^{-4}}{5^{-3} \times 10 \times t^{-8}} \ (t \neq 0)$

19. A road roller takes 750 complete revolutions to move once over to level a road. Find the area of the road if the diameter of a road roller is 84 cm and length is 1 m.

20. If 31z5 is a multiple of 3, where z is a digit, what might be the values of z?

21. Verify Euler's formula for these solids:
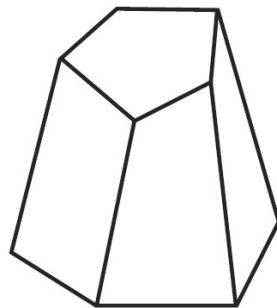
(i)   **(ii)**

22. Factorise: (i) $49y^2 + 84yz + 36z^2$ (ii) $16x^5 - 144x^3$

SECTION – D

23. The present age of father is four times the age of his son. After 10 years, age of father will become three times the age of his son. Find their present ages.

24. Plot the following points on same graph sheet. Verify if they lie on a line
(a) A(4, 0), B(4, 2), C(4, 6), D(4, 2.5)
(b) P(1, 1), Q(2, 2), R(3, 3), S(4, 4)

25. Factorise the expressions and divide them as directed.
(i) $(5p^2 - 25p + 20) \div (p - 1)$ (ii) $4yz(z^2 + 6z - 16) \div 2y(z + 8)$

26. Express the following numbers in standard form.
(i) 0.0000000000085
(ii) 0.00000000000942
(iii) 6020000000000000
(iv) 31860000000

27. Using identities, evaluate (i) 78×82 (ii) 8.9^2

28. Two persons could fit new windows in a house in 3 days.
(i) One of the persons fell ill before the work started. How long would the job take now?
(ii) How many persons would be needed to fit the windows in one day?

29. In the time table of a school, periods allotted per week to different teaching subjects are given below:

Subject	Hindi	English	Maths	Science	Social Science	Computer	Sanskrit
Period Allotted	7	8	8	8	7	4	3

Draw a pie chart for this data.

30. Diameter of cylinder A is 7 cm, and the height is 14 cm. Diameter of cylinder B is 14 cm and height is 7 cm. Without doing any calculations can you suggest whose volume is greater? Verify it by finding the volume of both the cylinders. Check whether the cylinder with greater volume also has greater surface area?