KENDRIYA VIDYALAYA GACHIBOWLI, GPRA CAMPUS, HYD–32

SAMPLE PAPER 02 FOR SESSION ENDING EXAM (2018-19)

SUBJECT: MATHEMATICS

BLUE PRINT FOR SESSION ENDING EXAM: CLASS VII

Unit/Topic	VSA (1 mark)	SA-I (2 marks)	SA-II (3 marks)	LA (4 marks)	Total
Integers	--	--	1(3)	--	**1(3)**
Congruence of Triangles	--	--	1(3)	1(4)	**2(7)**
Comparing Quantities	--	1(2)	--	1(4)	**2(6)**
Rational Numbers	--	1(2)	1(3)	1(4)	**3(9)**
Practical Geometry	--	--	2(6)	1(4)	**3(10)**
Perimeter and Area	1(1)	1(2)	2(6)	1(4)	**5(13)**
Algebraic Expressions	1(1)	--	2(6)	1(4)	**4(11)**
Exponents and Powers	2(2)	1(2)	--	1(4)	**4(8)**
Symmetry	1(1)	1(2)	1(3)	--	**3(6)**
Visualizing Solid Shapes	1(1)	1(2)	--	1(4)	**3(7)**
Total	**6(6)**	**6(12)**	**10(30)**	**8(32)**	**30(80)**

Note:

1) 20% i.e. 16 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 02 FOR SESSION ENDING EXAM (2018-19)

SUBJECT: MATHEMATICS **MAX. MARKS : 80**

CLASS : VII **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. Express 729 as a power 3.

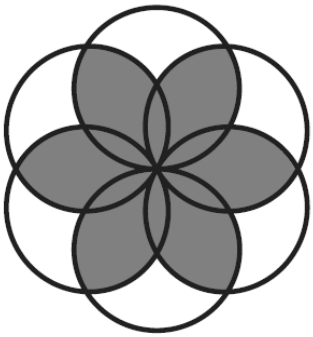
2. Express 648 as a product of powers of prime factors

3. If $p = -2$, find the value of $-3p^2 + 4p + 7$

4. What is the circumference of a circle of diameter 10 cm (Take $\pi = 3.14$)?

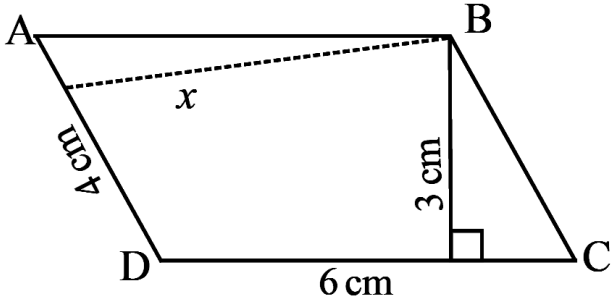
5. What cross-sections do you get when you give a vertical cut to the brick?

6. Find the number of lines of symmetry of the given figure:



SECTION – B

7. The two sides of the parallelogram ABCD are 6 cm and 4 cm. The height corresponding to the base CD is 3 cm (see below Fig). Find the height corresponding to the base AD.



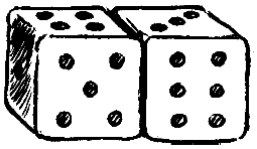
8. Using laws of exponents, simplify and write the answer in exponential form: $(2^{20} \div 2^{15}) \times 2^3$

9. The number of illiterate persons in a country decreased from 150 lakhs to 100 lakhs in 10 years. What is the percentage of decrease?

10. State the number of lines of symmetry for the following figures:
(a) A parallelogram (c) A regular hexagon

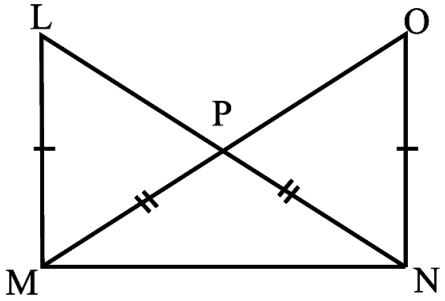
11. Find the value of $\frac{-7}{12} \div \left(\frac{-2}{13}\right)$

12. Two dice are placed side by side as shown in below figure. What the total would be on the face opposite to (a) 5 + 6 (b) 4 + 3



SECTION – C

13. In the below figure, it is given that LM = ON and NL = MO
(a) State the three pairs of equal parts in the triangles NOM and MLN.
(b) Is ΔNOM ≅ ΔMLN. Give reason?



14. The temperature at 12 noon was 10°C above zero. If it decreases at the rate of 2°C per hour until midnight, at what time would the temperature be 8°C below zero? What would be the temperature at mid-night?

15. Find any three rational numbers between $\frac{1}{4} and \frac{1}{2}$.

16. A circular flower bed is surrounded by a path 4 m wide. The diameter of the flower bed is 66 m. What is the area of this path? ($\pi = 3.14$)

17. Draw, wherever possible, a rough sketch of
(i) a triangle with both line and rotational symmetries of order more than 1.
(ii) a triangle with only line symmetry and no rotational symmetry of order more than 1.

18. Add:
(i) $14x + 10y - 12xy - 13$, $18 - 7x - 10y + 8xy$, $4xy$
(ii) $3p^2q^2 - 4pq + 5$, $-10\ p^2q^2$, $15 + 9pq + 7p^2q^2$

19. If a = 2, b = – 2, find the value of: (i) $a^2 + ab + b^2$ (iii) $a^2 - b^2$.

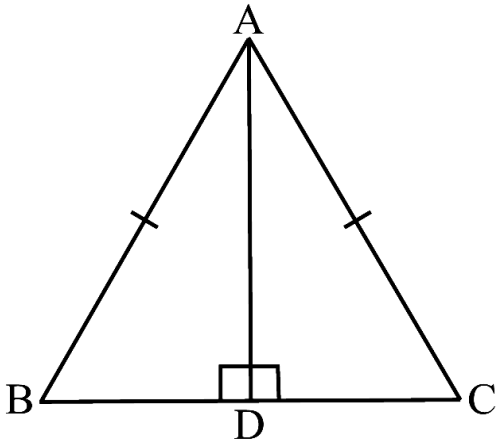
20. Construct ΔLMN, right-angled at M, given that LN = 5 cm and MN = 3 cm.

21. Let l be a line and P be a point not on l. Through P, draw a line m parallel to l. Now join P to any point Q on l. Choose any other point R on m. Through R, draw a line parallel to PQ. Let this meet l at S. What shape do the two sets of parallel lines enclose?

22. A verandah of width 2.25 m is constructed all along outside a room which is 5.5 m long and 4 m wide. Find: (i) the area of the verandah.
(ii) the cost of cementing the floor of the verandah at the rate of Rs 200 per m^2.

SECTION – D

23. ABC is an isosceles triangle with AB = AC and AD is one of its altitudes.
(i) State the three pairs of equal parts in ΔADB and ΔADC.
(ii) Is ΔADB ≅ ΔADC? Why or why not?
(iii) Is $\angle B = \angle C$? Why or why not?
(iv) Is BD = CD? Why or why not?



24. Manoj donates Rs. 2000 to a school, the interest on which is to be used for awarding 5 scholarships of equal value every year. If the donator earns an interest of 10% per annum, find the value of each scholarship.

25. Find: $(i)\frac{-8}{19}+\frac{(-2)}{57}$ $(ii)\frac{-6}{13}-\frac{-7}{15}$

26. Simplify: $\frac{25\times5^2\times t^8}{10^3\times t^4}$

27. From the sum of $2y^2 + 3yz$, $-y^2 - yz - z^2$ and $yz + 2z^2$, subtract the sum of $3y^2 - z^2$ and $-y^2 + yz + z^2$.

28. Two cross roads, each of width 10 m, cut at right angles through the centre of a rectangular park of length 700 m and breadth 300 m and parallel to its sides. Find the area of the roads. Also find the area of the park excluding cross roads. Give the answer in hectares.

29. Construct ΔPQR if PQ = 5 cm, $m\angle PQR = 105°$ and $m\angle QRP = 40°$.

30. Three cubes each with 2 cm edge are placed side by side to form a cuboid. Make an oblique sketch and find its length, breadth and height.