

**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 VII**

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

**Note:**

- 1) 20% i.e. 16 marks of 1<sup>st</sup> 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
<b>GRAND TOTAL</b>			<b>80</b>

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**CLASS : VII**

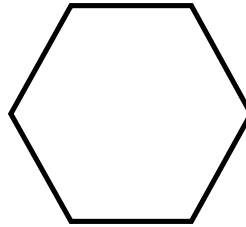
**MAX. MARKS : 80**  
**DURATION : 2½HRS**

**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. Find the number of lines of symmetry in the given figure:



2. If  $p = 2$ , find the value of  $p^2 - 2p - 100$ .
3. What is the circumference of a circular disc of radius 14 cm?
4. Two dice are placed side by side with 5 + 2, what is the total on the face opposite to the given numbers.
5. Express 3125 using exponential notation.
6. Express 540 as a product of powers of prime factors

**SECTION – B**

7. State the number of lines of symmetry for the following figures:  
(a) A square (b) A rectangle
8. 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.
9. The population of a city decreased from 25,000 to 24,500. Find the percentage decrease.
10. Expand by expressing powers of 10 in the exponential form: (i) 172 (ii) 5,643
11. What cross-sections do you get when you give a (i) vertical cut (ii) horizontal cut to the following solids? (a) A die (d) A circular pipe
12. Find the value of  $\frac{7}{24} - \frac{17}{36}$ .

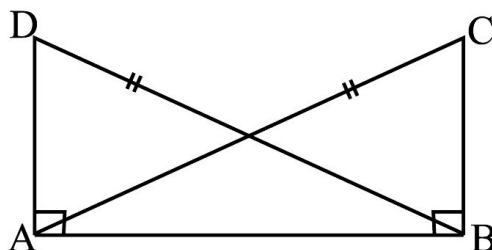
### SECTION – C

13. A shopkeeper earns a profit of Re 1 by selling one pen and incurs a loss of 40 paise per pencil while selling pencils of her old stock. In a particular month she incurs a loss of Rs 5. In this period, she sold 45 pens. How many pencils did she sell in this period?

14. Simplify:  $\frac{3^5 \times 10^5 \times 25}{5^7 \times 6^5}$

15. In the below figure,  $DA \perp AB$ ,  $CB \perp AB$  and  $AC = BD$ . State the three pairs of equal parts in  $\triangle ABC$  and  $\triangle DAB$ . Which of the following statements is meaningful?

(i)  $\triangle ABC \cong \triangle BAD$  (ii)  $\triangle ABC \cong \triangle ABD$



16. Subtract:

(i)  $5a^2 - 7ab + 5b^2$  from  $3ab - 2a^2 - 2b^2$

(ii)  $4pq - 5q^2 - 3p^2$  from  $5p^2 + 3q^2 - pq$

17. Represent these numbers on the number line. (i)  $-\frac{6}{4}$  (ii)  $\frac{7}{6}$  (iii)  $\frac{11}{7}$

18. The minute hand of a circular clock is 15 cm long. How far does the tip of the minute hand move in 1 hour. (Take  $\pi = 3.14$ )

19. Find the value of the following expressions when  $n = -2$ .

(i)  $5n - 2$  (ii)  $5n^2 + 5n - 2$  (iii)  $n^3 + 5n^2 + 5n - 2$

20. Construct a triangle PQR, given that  $PQ = 3$  cm,  $QR = 5.5$  cm and  $\angle PQR = 60^\circ$ .

21. Draw a line, say AB, take a point C outside it. Through C, draw a line parallel to AB using ruler and compasses only.

22. The area of a square park is the same as of a rectangular park. If the side of the square park is 60 m and the length of the rectangular park is 90 m, find the breadth of the rectangular park.

### SECTION – D

23. Anil deposited Rs. 20,000 for saving as a fixed deposit in a bank at 10% per annum. Find the amount he will get after 5 years.

24. (a) What should be taken away from  $3x^2 - 4y^2 + 5xy + 20$  to obtain  $-x^2 - y^2 + 6xy + 20$ ?

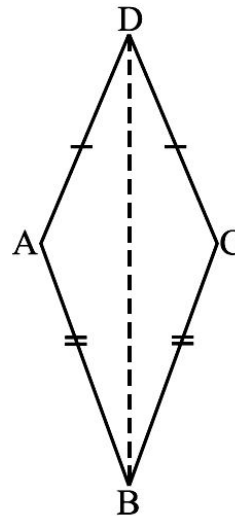
(b) From the sum of  $3x - y + 11$  and  $-y - 11$ , subtract  $3x - y - 11$ .

25. Through a rectangular field of length 90 m and breadth 60 m, two roads are constructed which are parallel to the sides and cut each other at right angles through the centre of the fields. If the width of each road is 3 m, find  
 (i) the area covered by the roads.  
 (ii) the cost of constructing the roads at the rate of Rs 110 per m<sup>2</sup>.

26. Find the value of (i)  $\frac{3}{13} \div \left(\frac{-4}{65}\right)$       (ii)  $\frac{-7}{12} \div \left(\frac{-2}{13}\right)$

27. Draw the net of a square pyramid with base as square.

28. In the adjoining figure, AD = CD and AB = CB.  
 (i) State the three pairs of equal parts in  $\triangle ABD$  and  $\triangle CBD$ .  
 (ii) Is  $\triangle ABD \cong \triangle CBD$ ? Why or why not?  
 (iii) Does BD bisect  $\angle ABC$ ? Give reasons.  
 (iv) Does BD bisect  $\angle ADC$ ? Give reasons.



29. Construct  $\triangle ABC$  such that AB = 2.5 cm, BC = 6 cm and AC = 6.5 cm. Measure  $\angle B$ .

30. Complete the following table:

Shape	Centre of Rotation	Order of Rotation	Angle of Rotation
Square			
Rectangle			
Equilateral triangle			
Rhomus			