

**KENDRIYA VIDYALAYA GACHIBOWLI , HYDERABAD - 32**  
**SAMPLE PAPER 02 FOR SA - II (2016-17)**

**SUBJECT: MATHEMATICS**

**BLUE PRINT : SA-II CLASS VII**

<b>Unit/Topic</b>	<b>VSA (1 mark)</b>	<b>Short answer (2 marks)</b>	<b>Short answer (3 marks)</b>	<b>Long answer (4 marks)</b>	<b>Total</b>
Congruence of triangles	1(1)	1(2)	1(3)	1(4)	<b>4(10)</b>
Comparison of Quantities	1(1)	1(2)	1(3)	1(4)	<b>4(10)</b>
Rational Numbers	1(1)	--	2(6)	--	<b>3(7)</b>
Perimeter and Area	1(1)	1(2)	1(3)	1(4)	<b>4(10)</b>
Algebraic Expressions	1(1)	1(2)	1(3)	1(4)	<b>4(10)</b>
Symmetry	1(1)	1(2)	1(3)	--	<b>3(6)</b>
Visualizing Solid Shapes	2(2)	1(2)	1(3)	--	<b>4(7)</b>
<b>Total</b>	<b>8(8)</b>	<b>6(12)</b>	<b>8(24)</b>	<b>4(16)</b>	<b>26(60)</b>

**MARKING SCHEME FOR SA – II**

<b>SECTION</b>	<b>MARKS</b>	<b>NO. OF QUESTIONS</b>	<b>TOTAL</b>
<b>VSA</b>	1	8	08
<b>SA – I</b>	2	6	12
<b>SA – II</b>	3	8	24
<b>LA</b>	4	4	16
<b>GRAND TOTAL</b>			<b>60</b>

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**SAMPLE PAPER 02 FOR SA - II (2016-17)**

**SUBJECT: MATHEMATICS**  
**CLASS : VII**

**MAX. MARKS : 60**  
**DURATION : 2½ HRS**

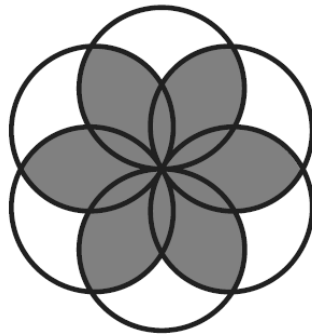
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**General Instructions:**

1. All questions are compulsory.
  2. Question paper is divided into four sections: Section A consists 8 questions each carry 1 marks, Sections B consists 6 questions each carry 2 marks, Sections C consists 8 questions each carry 3 marks and Sections D consists 4 questions each carry 4 marks
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**SECTION – A**

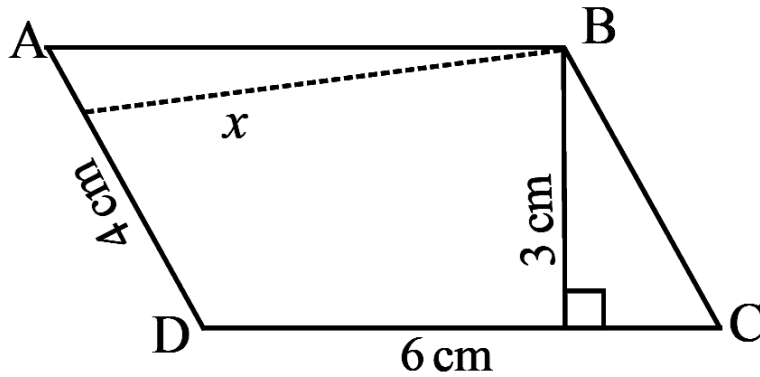
1. Find the ratio of 9 m to 27 cm.
2.  $\triangle ABC$  and  $\triangle PQR$  are congruent under the correspondence:  $ABC \leftrightarrow RPQ$ , then write the part of  $\triangle ABC$  that correspond to  $\overline{PQ}$ .
3. Write a rational numbers equivalent to  $\frac{5}{-3}$
4. If  $p = -2$ , find the value of  $-2p^3 - 3p^2 + 4p + 7$
5. What is the circumference of a circle of diameter 10 cm (Take  $\pi = 3.14$ )?
6. Two dice are placed side by side with 6 + 2, what is the total on the face opposite to the given numbers.
7. What cross-sections do you get when you give a vertical cut to the brick?
8. Find the number of lines of symmetry of the given figure:



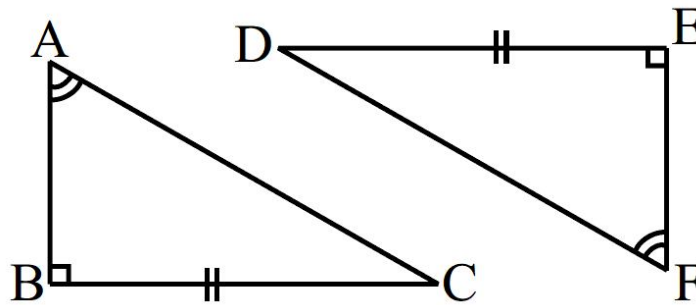
**SECTION – B**

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. Find the value of the expressions  $a^2 + 2ab + b^2$  for  $a = 3, b = 2$ .
11. State the number of lines of symmetry for the following figures:  
(a) A rhombus (b) A parallelogram (c) A regular hexagon

12. 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.



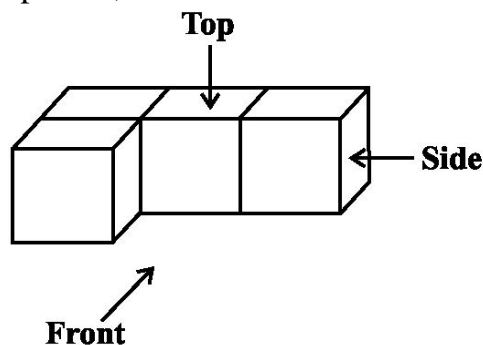
13. Explain, why  $\triangle ABC \cong \triangle FED$  (see below figure).



14. What cross-sections do you get when you give a (i) vertical cut (ii) horizontal cut to the following solids? (a) A circular pipe (b) An ice cream cone

### SECTION - C

15. Selling price of a toy car is Rs 540. If the profit made by shopkeeper is 20%, what is the cost price of this toy?
16. Find any three rational numbers between  $\frac{1}{4}$  and  $\frac{1}{2}$
17. 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? ( $\pi = 3.14$ )
18. Represent these numbers on the number line. (i)  $-\frac{7}{4}$  (ii)  $\frac{5}{6}$  (iii)  $\frac{9}{7}$
19. Draw a rough sketch of a quadrilateral with line symmetry but not a rotational symmetry of order more than 1.
20. For given solid, draw the top view, front view and side view.



21. Add:

(i)  $14x + 10y - 12xy - 13, 18 - 7x - 10y + 8xy, 4xy$

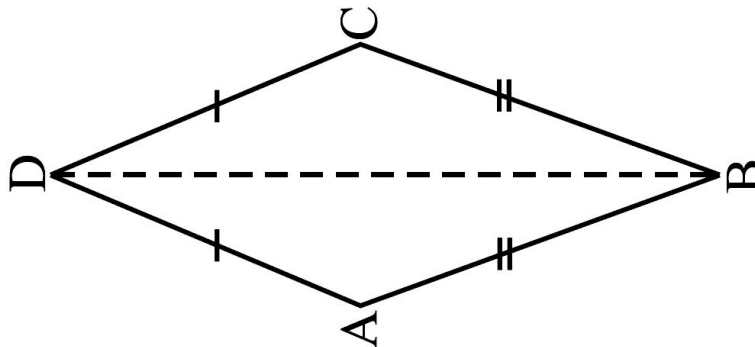
(ii)  $3p^2q^2 - 4pq + 5, -10p^2q^2, 15 + 9pq + 7p^2q^2$

22. In the below 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.



**SECTION - D**

23. 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. What value depicted from this?

24. 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  $m^2$ .

25. (a) What should be added to  $x^2 + xy + y^2$  to obtain  $2x^2 + 3xy$ ?

(b) What should be subtracted from  $2a + 8b + 10$  to get  $-3a + 7b + 16$ ?

26. ABC is an isosceles triangle with  $AB = AC$  and  $AD$  is one of its altitudes.

(i) State the three pairs of equal parts in  $\triangle ADB$  and  $\triangle ADC$ .

(ii) Is  $\triangle ADB \cong \triangle ADC$ ? Why or why not?

(iii) Is  $\angle B = \angle C$ ? Why or why not?

(iv) Is  $BD = CD$ ? Why or why not?

