

KENDRIYA VIDYALAYA GACHIBOWLI , HYDERABAD - 32
SAMPLE PAPER 03 FOR SA - II (2016-17)

SUBJECT: MATHEMATICS

BLUE PRINT : SA-II CLASS VII

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

MARKING SCHEME FOR SA – II

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

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CLASS : VII

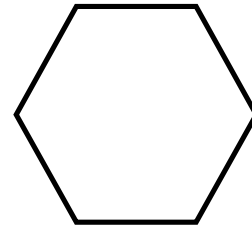
MAX. MARKS : 60
DURATION : 2½ HRS

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

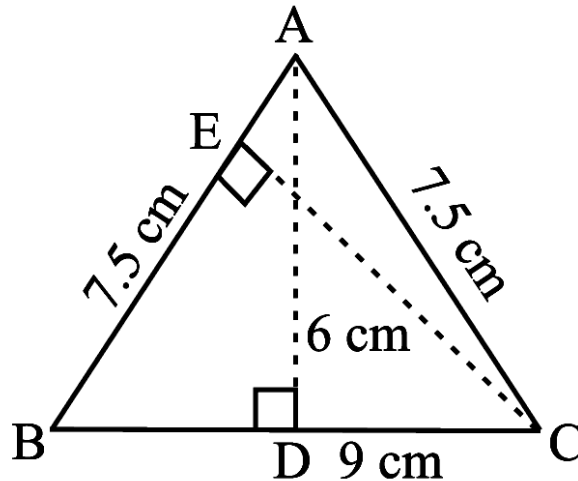
1. Find the ratio of 30 days to 36 hours.
2. $\triangle ABC$ and $\triangle PQR$ are congruent under the correspondence: $BCA \leftrightarrow RPQ$, then the part of $\triangle ABC$ that correspond to \overline{PQ} .
3. Find the number of lines of symmetry in the given figure:
4. Write a rational numbers equivalent to $\frac{4}{9}$
5. If $p = -2$, find the value of $p^2 - 2p - 100$.
6. Reduce $\frac{36}{-24}$ to standard form.
7. What is the circumference of a circular disc of radius 14 cm?
8. Two dice are placed side by side with 5 + 2, what is the total on the face opposite to the given numbers.



SECTION – B

9. The population of a city decreased from 25,000 to 24,500. Find the percentage decrease.
10. Write the rational numbers in ascending order: $\frac{-3}{7}, \frac{-3}{2}, \frac{-3}{4}$
11. Find the value of the expressions $a^3 - b^3$ for $a = 3, b = 2$.
12. By applying SAS congruence rule, you want to establish that $\triangle PQR \cong \triangle FED$. It is given that $PQ = FE$ and $RP = DF$. What additional information is needed to establish the congruence?
13. 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

14. $\triangle ABC$ is isosceles with $AB = AC = 7.5$ cm and $BC = 9$ cm (see below figure). The height AD from A to BC , is 6 cm. Find the area of $\triangle ABC$. What will be the height from C to AB i.e., CE ?



SECTION – C

15. Juhi sells a washing machine for Rs 13,500. She loses 20% in the bargain. What was the price at which she bought it?

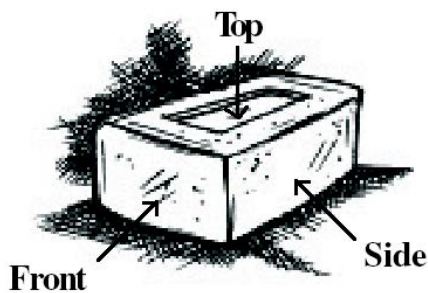
16. Subtract:

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

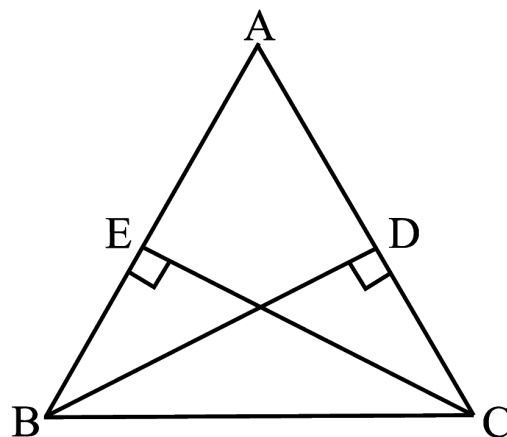
(ii) $4pq - 5q^2 - 3p^2$ from $5p^2 + 3q^2 - pq$

17. Find any three rational numbers between $\frac{3}{5}$ and $\frac{3}{4}$.

18. For given solid, draw the top view, front view and side view.

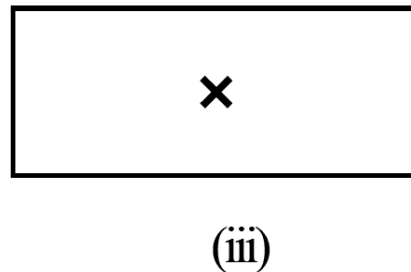
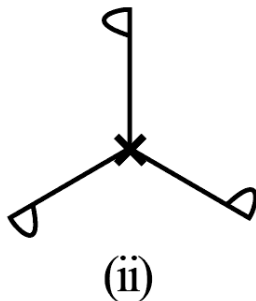
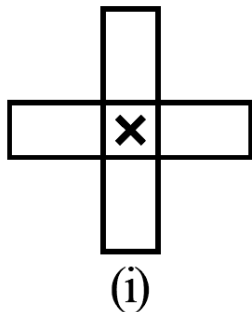


A brick



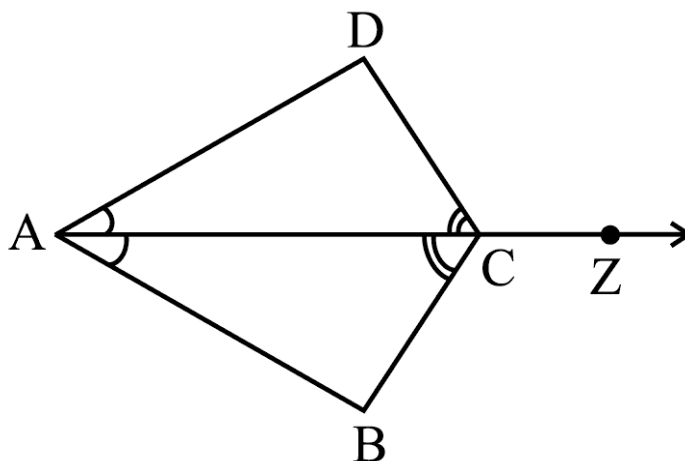
19. In the above right sided Fig, BD and CE are altitudes of $\triangle ABC$ such that $BD = CE$.
- (i) State the three pairs of equal parts in $\triangle CBD$ and $\triangle BCE$.
 - (ii) Is $\triangle CBD \cong \triangle BCE$? Why or why not?
 - (iii) Is $\angle DCB = \angle ECB$? Why or why not?

20. 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 $\pi = 3.14$)
21. What letters of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about?
 (a) a vertical mirror (b) a horizontal mirror (c) both horizontal and vertical mirrors
22. Give the order of the rotational symmetry of the given figures about the point marked 'x'



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. What are the benefits of savings?
24. 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.
25. In the below figure, ray AZ bisects $\angle DAB$ as well as $\angle DCB$.
 (i) State the three pairs of equal parts in triangles BAC and DAC.
 (ii) Is $\triangle BAC \cong \triangle DAC$? Give reasons.
 (iii) Is $AB = AD$? Justify your answer.
 (iv) Is $CD = CB$? Give reasons.



26. (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 $3x - y - 11$.