

KENDRIYA VIDYALAYA SANGATHAN, HYDERABAD REGION
SAMPLE PAPER 02 FOR HALF YEARLY EXAM (2017-18)

SUBJECT: MATHEMATICS

BLUE PRINT FOR HALF YEARLY EXAM: CLASS VII

Unit/Topic	VSA (1 mark)	Short answer (2 marks)	Short answer (3 marks)	Long answer (4 marks)	Total
Integers	1(1)	--	1(3)	1(4)	3(8)
Fractions and Decimals	1(1)	1(2)	1(3)	1(4)	4(10)
Data Handlings	--	1(2)	1(3)	1(4)	3(9)
Simple Equations	1(1)	--	1(3)	1(4)	3(8)
Lines and Angles	1(1)	1(2)	2(6)	--	4(9)
Triangle and its properties	--	1(2)	1(3)	1(4)	3(9)
Congruence of Triangles	--	1(2)	1(3)	1(4)	3(9)
Comparing Quantities	1(1)	1(2)	1(3)	1(4)	4(10)
Rational Numbers	1(1)	--	1(3)	1(4)	3(8)
Total	6(6)	6(12)	10(30)	8(32)	30(80)

MARKING SCHEME FOR HALF YEARLY EXAM

SECTION	MARKS	NO. OF QUESTIONS	TOTAL
VSA	1	6	08
SA – I	2	6	12
SA – II	3	10	30
LA	4	8	32
GRAND TOTAL			80

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SUBJECT: MATHEMATICS

MAX. MARKS : 80

CLASS : VII

DURATION : 3 HRS

General Instructions:

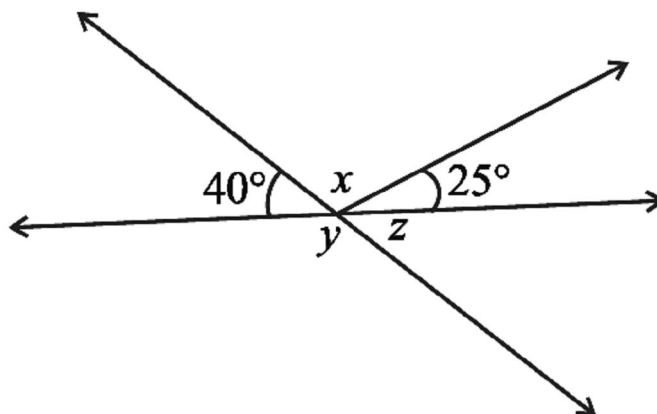
- (i). All questions are compulsory.
- (ii). This question paper contains **30** questions divided into four Sections A, B, C and D.
- (iii). **Section A** comprises of 6 questions of **1 mark** each. **Section B** comprises of 6 questions of **2 marks** each. **Section C** comprises of 10 questions 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. Solve: $3n + 7 = 25$
2. Evaluate: $[(-6) + 5] \div [(-2) + 1]$
3. Express 7 rupees 7 paise as rupees using decimals.
4. Find the angle which is equal to its supplement.
5. Find the ratio of 9 m to 27 cm
6. Write a rational numbers equivalent to $\frac{5}{-3}$

SECTION – B

7. The length of a rectangle is 7.1 cm and its breadth is 2.5 cm. What is the area of the rectangle?
8. The number of illiterate persons in a country decreased from 150 lakhs to 100 lakhs in 10 years. What is the percentage of decrease?
9. Find the values of the angles x , y , and z in the given figure:



10. The median of observations 11, 12, 14, 18, $x + 2$, 20, 22, 25, 61 arranged in ascending order is 21. Find the value of x .

11. If $\triangle DEF \cong \triangle BCA$, write the part(s) of $\triangle BCA$ that correspond to (i) $\angle E$ (ii) EF (iii) $\angle F$ (iv) DF

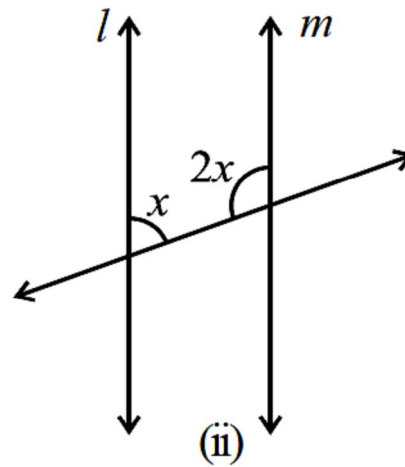
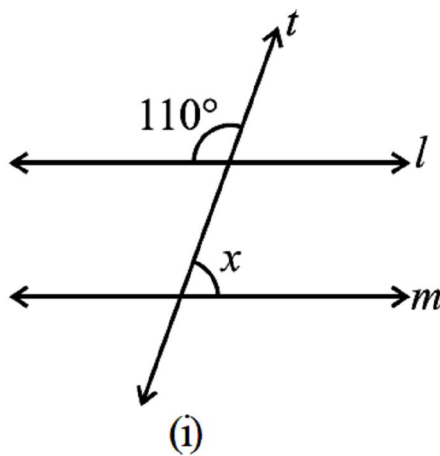
12. PQR is a triangle right angled at P . If $PQ = 10$ cm and $PR = 24$ cm, find QR .

SECTION – C

13. The marks (out of 100) obtained by a group of students in a science test are 85, 76, 90, 85, 39, 48, 56, 95, 81 and 75. Find the:

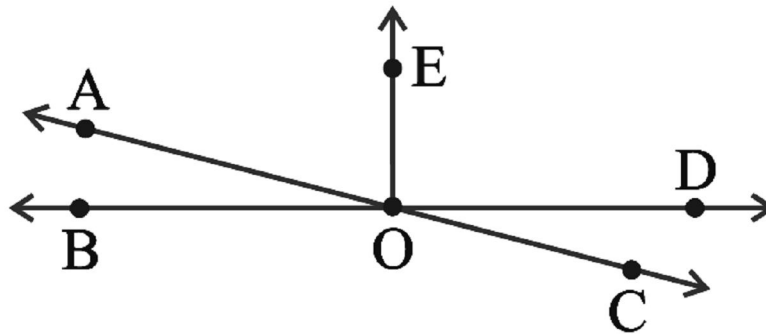
- (i) Range of the marks obtained.
- (ii) Mean marks obtained by the group.
- (iii) What you will do to get good marks?

14. Find the value of x in each of the following figures if $l \parallel m$.



15. In the adjoining figure, name the following pairs of angles.

- (i) Obtuse vertically opposite angles
- (ii) Adjacent complementary angles
- (iii) Adjacent angles that do not form a linear pair



16. Maya, Madhura and Mohsina are friends studying in the same class. In a class test in geography, Maya got 16 out of 25. Madhura got 20. Their average score was 19. How much did Mohsina score?

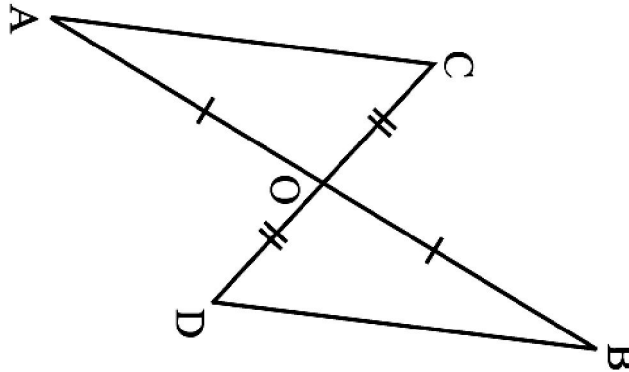
17. The temperature at 12 noon was 10°C above zero. If it decreases at the rate of 2°C per hour until midnight, at what time would the temperature be 8°C below zero? What would be the temperature at mid-night?

18. 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?

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

20. Sushant reads $\frac{1}{3}$ part of a book in 1 hour. How much part of the book will he read in $2\frac{1}{5}$ hours?

21. In the below figure, AB and CD bisect each other at O. Prove that (i) $\triangle AOC \cong \triangle BOD$ (ii) $AC = BD$



22. A tree is broken at a height of 7 m from the ground and its top touches the ground at a distance of 24 m from the base of the tree. Find the original height of the tree.

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. Represent these numbers on the number line. (i) $-\frac{7}{4}$ (ii) $\frac{5}{6}$ (iii) $\frac{9}{7}$ (iv) $\frac{5}{4}$

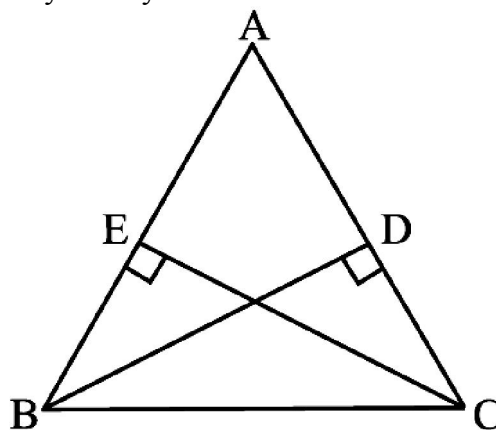
25. The length of a rectangle is two times its width. The perimeter of the rectangle is 180 cm. Find the dimensions of the rectangle and also find its area.

26. In the below figure, 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?

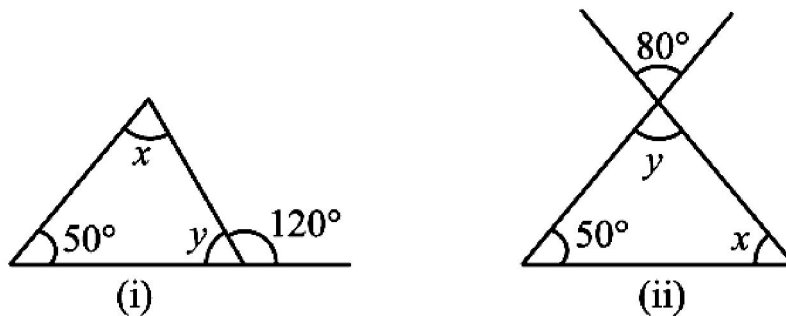
(iii) Is $\angle DCB = \angle ECB$? Why or why not?



27. 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. (i) 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? (ii) In the next month she earns neither profit nor loss. If she sold 70 pens, how many pencils did she sell?

28. It takes 17 full specific type of trees to make one tonne of paper. If there are 221 such trees in a forest, then (i) what fraction of forest will be used to make; (a) 5 tonnes of paper. (b) 10 tonnes of paper. (ii) To save $\frac{7}{13}$ part of the forest how much of paper we have to save.

29. Find the values of the unknowns x and y in the following diagrams:



30. Two hundred students of 6th and 7th class were asked to name their favourite colour so as to decide upon what should be the colour of their School Building. The results are shown in the following table. Represent the given data on a bar graph.

Favourite Colour	Red	Green	Blue	Yellow	Orange
Number of Students	43	19	55	49	34

Answer the following questions with the help of the bar graph:

- (i) Which is the most preferred colour and which is the least preferred?
- (ii) How many colours are there in all? What are they?

