KENDRIYA VIDYALAYA GACHIBOWLI, GPRA CAMPUS, HYD–32

SAMPLE PAPER 02 FOR PERIODIC TEST II EXAM (2019-20)

SUBJECT: MATHEMATICS(041)

BLUE PRINT FOR PERIODIC TEST - II: CLASS IX

Chapter	MCQ (1 mark)	VSA (1 mark)	SA – I (2 marks)	SA – II (3 marks)	LA (4 marks)	Total
Lines and Angles	2(2)	2(2)	**2(1)***	3(1)	4(1)	**13(7)**
Triangles	2(2)	1(1)	2(1)	6(2)	**4(1)***	**15(6)**
Quadrilaterals	1(1)	2(2)	2(1)	**3(1)***	4(1)	**12(5)**
Total	**5(5)**	**5(5)**	**6(3)**	**12(4)**	**12(3)**	**40(20)**

MARKING SCHEME FOR PERIODIC TEST - II

SECTION	MARKS	NO. OF QUESTIONS	TOTAL
MCQ	1	5	05
VSA	1	5	05
SA – I	2	3	06
SA – II	3	4	12
LA	4	3	12
GRAND TOTAL			**40**

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SAMPLE PAPER 02 FOR PERIODIC TEST II EXAM (2019-20)

SUBJECT: MATHEMATICS **MAX. MARKS : 40**

CLASS : IX **DURATION: 1½ HRS**

General Instructions:

(i). **All** questions are compulsory.

(ii). This question paper contains **20** questions divided into four Sections A, B, C and D.

(iii). **Section A** comprises of 10 questions of **1 mark** each. **Section B** comprises of 3 questions of **2 marks** each. **Section C** comprises of 4 questions of **3 marks** each and **Section D** comprises of 3 questions of **4 marks** each.

(iv). There is no overall choice. However, an internal choice has been provided in one question of 2 marks each, one question of 3 marks each and one question of 4 marks each. You have to attempt only one of the alternatives in all such questions.

(v). Use of Calculators is not permitted

SECTION – A

Questions 1 to 10 carry 1 mark each.

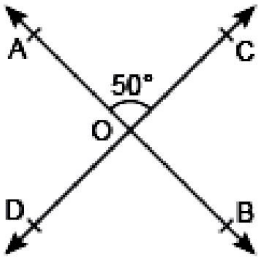
1. If diagonals of a quadrilateral are equal and bisect each other at right angles, then it is a:
(a) parallelogram (b) square (c) rhombus (d) trapezium

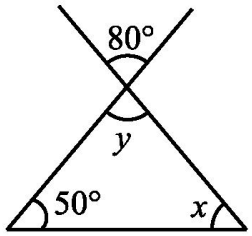
2. Two angles measures a – 60° and 123° – 2a. If each one is opposite to equal sides of an isosceles triangle, then find the value of a.
(a) 60^0 (b) 123^0 c) 61^0 (d) none of these

3. In a triangle, the sum of its two sides is _____ third side.
(a) equal to (b) less than (c) greater than (d) none of these

4. The angle which is five times its supplement is
(a) 150^0 (b) 180^0 c) 90^0 (d) 360^0

5. In the given figure, if ∠AOC = 50° then find the measure of (∠AOD + ∠COB).
(a) 150^0 (b) 180^0 c) 310^0 (d) 260^0





6. Find the value of *x* and *y* in the adjacent figure.

7. Diagonals of a quadrilateral ABCD bisect each other. If ∠A = 35^0, determine ∠B.

8. In ABC and DEF, AB = FD and ∠A = ∠D. Write the third condition for which two triangles are congruent by SAS congruence rule.

9. Can all the angles of a quadrilateral be right angles? Give reason for your answer.

10. If two interior angles on the same side of a transversal intersecting two parallel lines are in the ratio 2 : 3, then find the greater of the two angles.

SECTION – B

Questions 11 to 13 carry 2 marks each.

11. Angles of a quadrilateral are in the ratio 3 : 4 : 4 : 7. Find all the angles of the quadrilateral.

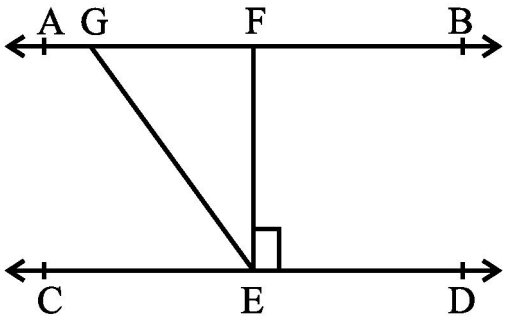
OR

In a parallelogram, show that the angle bisectors of two adjacent angles intersect at right angles.

12. Two angles of triangle are equal and the third angle is greater than each of these angles by 30°. Find all the angles of the triangle.

OR

In below figure, if AB || CD, EF ⊥ CD and ∠GED = 126°, find ∠AGE, ∠GEF and ∠FGE.



13. Prove that "*Angles opposite to equal sides of an isosceles triangle are equal*"

SECTION – C

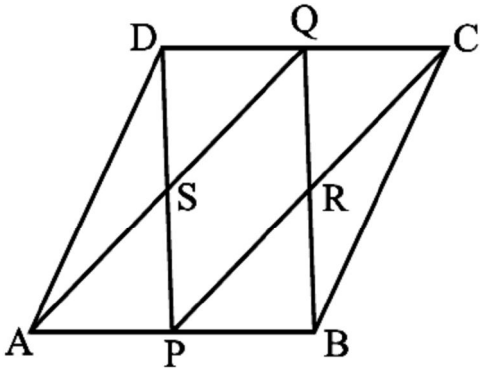
Questions 14 to 17 carry 3 marks each.

14. ABCD is a parallelogram in which P and Q are mid-points of opposite sides AB and CD (see the below figure). If AQ intersects DP at S and BQ intersects CP at R, show that:

(i) APCQ is a parallelogram.

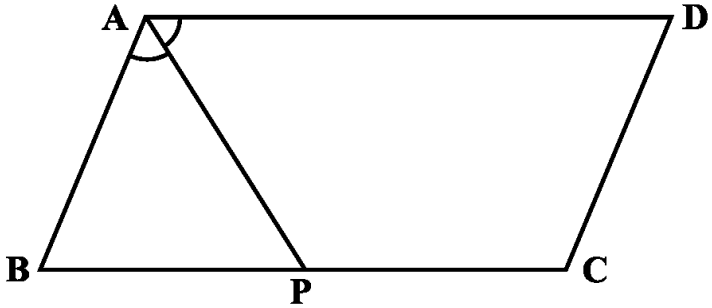
(ii) DPBQ is a parallelogram.

(iii) PSQR is a parallelogram.

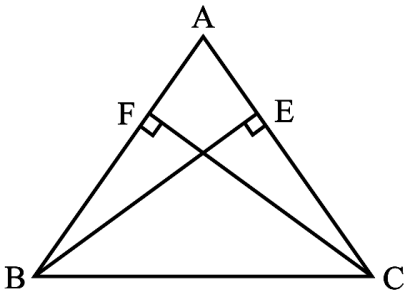


OR

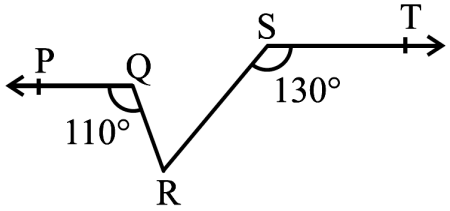
In the below figure, P is the mid-point of side BC of a parallelogram ABCD such that ∠BAP = ∠DAP. Prove that AD = 2CD.



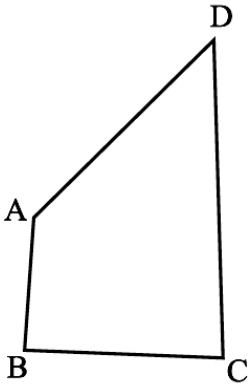
15. ABC is a triangle in which altitudes BE and CF to sides AC and AB are equal (see below figure). Show that (i) Δ ABE $\cong$ Δ ACF (ii) AB = AC, i.e., ABC is an isosceles triangle.



16. In the fig, if PQ || ST, $\angle PQR = 110^0$ and $\angle RST = 130^0$ then find the value of $\angle QRS$.



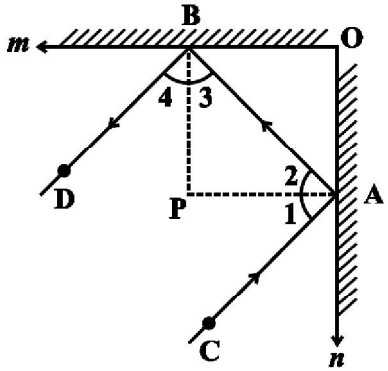
17. AB and CD are respectively the smallest and longest sides of a quadrilateral ABCD (see the adjoining figure). Show that $\angle A > \angle C$ and $\angle B > \angle D$.



SECTION – D

Questions 18 to 20 carry 4 marks each.

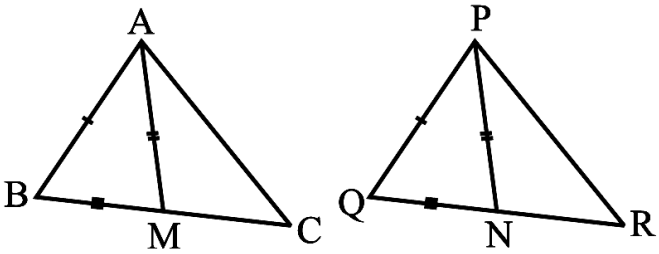
18. In the below figure, *m* and *n* are two plane mirrors perpendicular to each other. Show that incident ray CA is parallel to reflected ray BD.



19. Prove that "If three sides of one triangle are equal to three sides of the other triangle, then the two triangles are congruent".

OR

Two sides AB and BC and median AM of one triangle ABC are respectively equal to sides PQ and QR and median PN of Δ PQR (see the below figure). Show that: (i) Δ ABM $\cong$ Δ PQN (ii) Δ ABC $\cong$ Δ PQR



20. P, Q, R and S are respectively the mid-points of the sides AB, BC, CD and DA of a quadrilateral ABCD such that AC $\perp$ BD. Prove that PQRS is a rectangle.