

KENDRIYA VIDYALAYA GACHIBOWLI, HYDERABAD
SAMPLE PAPER 02 FOR FA – 3 (2016 – 17)
CLASS – IX
MATHEMATICS

T.T. 1:30

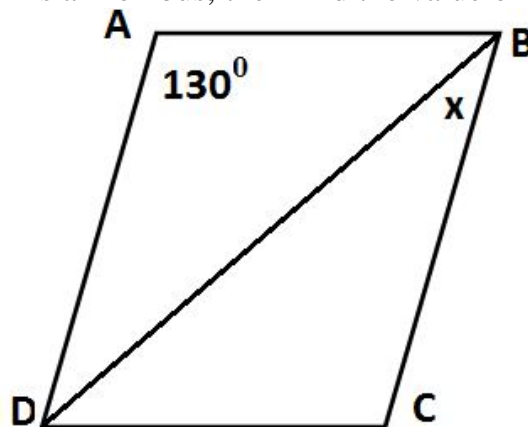
M.M. 40

General Instructions:

1. All questions are compulsory.
2. Question paper is divided into four sections: Section A contains 4 questions each carry 1 mark, Section B contains 4 questions each carry 2 marks, Section C contains 4 questions each carry 3 marks and Section D contains 4 questions each carry 4 marks.

SECTION – A

1. Find the value of k , if $x = 1, y = 2$ is a solution of the equation $2x + ky = 5$.
2. Find the points where the graph of the equation $3x + 4y = 12$ cuts the x -axis.
3. In the below figure ABCD is a rhombus, then find the value of x .



4. In parallelogram CARS, $m\angle C = 5x - 20$ and $m\angle A = 3x + 40$. Find the value of x

SECTION – B

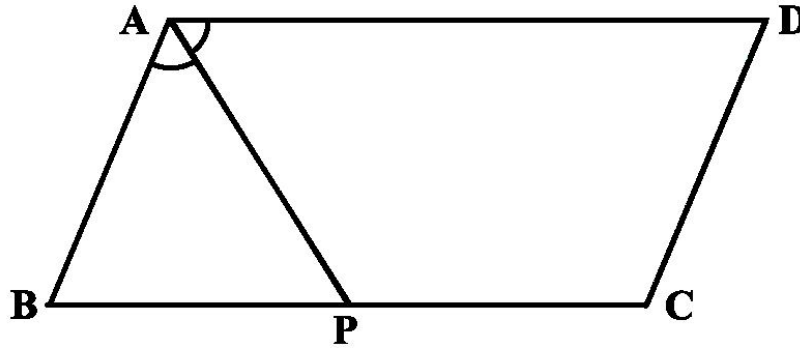
5. Write four solutions for the following equations: $3x - y + 5 = 0$
6. If the point $(3, 4)$ lies on the graph of the equation $3y = ax + 7$, find the value of a .
7. Prove that “Opposite angles of parallelogram are equal”.
8. Angles of a quadrilateral are in the ratio $5 : 6 : 2 : 7$. Find all the angles of the quadrilateral.

SECTION – C

9. Draw the graph of $2x - 3y + 12 = 0$ in a Cartesian plane and find the point where graph intersects at y -axis.
10. Construct the angle 105° by using compass.

11. Construct a triangle ABC in which $BC = 8\text{cm}$, $\angle B = 45^\circ$ and $AB - AC = 3.5\text{ cm}$.

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



SECTION – D

13. Give the geometric representations of $2y + 3 = 0$ as an equation
(i) in one variable (ii) in two variables

14. A farmer has a field in the shape of quadrilateral. He joined all the midpoints of the sides of a quadrilateral; in order to form a new quadrilateral and donated this new quadrilateral field to Village for Hospital. Prove that the quadrilateral so formed is a parallelogram. What value is depicted from this?

15. Prove that “A quadrilateral is a parallelogram if a pair of opposite sides is equal and parallel”.

16. Construct a triangle ABC, in which $\angle B = 60^\circ$, $\angle C = 45^\circ$ and $AB + BC + CA = 11\text{ cm}$.

