Maths Revision Test 8

Time : 60 mins

Max Marks : 40

Q1.

(a) Write the co-efficients of x^2 in each of the following:

(i) $2 + x^2 + x$

(ii) $2 - x^2 + x^3$

(iii) $\frac{\pi}{2}x^2 + x$

3 marks

(b) Find p(0), p(1) and p(2) for each of the polynomial

$p(t) = 2 + t + 2t^2 - t^3$

3 marks

Q2. Solve:

(i) Check whether $7 + 3x$ is a factor of $3x^3 + 7x$

(ii) Factorize $12x^2 - 7x + 1$

6 marks

Q3. Prove that the angle formed by the bisector of interior angle A and the bisector of exterior angle B of a triangle ABC is half of angle C.

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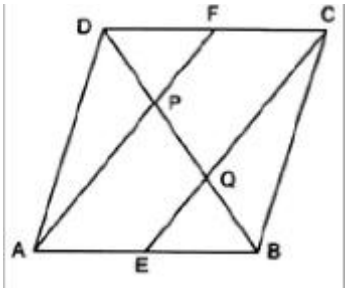
4 marks

Q4 The angles of a triangle are arranged in ascending order of magnitude. If the difference between two consecutive angles is 10°, find all the three angles.

3 marks

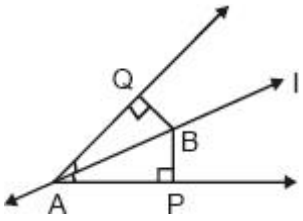
Q5 In a parallelogram ABCD, E and F are the mid-points of sides AB and CD respectively (see figure). Show that the line segments AF and EC trisect the diagonal BD.



3 marks

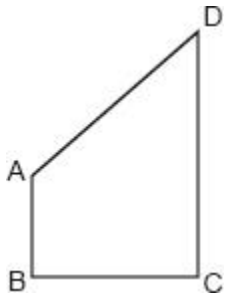
Q6. Line l is the bisector of an angle A and B is any point on l. BP and BQ are perpendiculars from B to the arms of ∠A (see Figure). Show that:

(i) ΔAPB ≅ ΔAQB
(ii) BO = BQ or B is equidistant from the arms of ∠A.



. 3 marks

Q7. AB and CD are respectively the smallest and longest sides of a quadrilateral ABCD (see figure). Show that ∠A > ∠C and ∠B > ∠D.



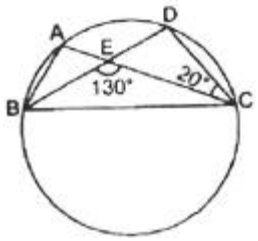
4 marks

Q8. Three girls Reshma, Salma and Mandip are playing a game by standing on a circle of radius 5 m drawn in a park. Reshma throws a hall to Salma, Salma to Mandip, Mandip to Reshma. If the distance between Reshma and Salma and between Salma and Mandip is 6 m each, what is the distance between Reshma and Mandip?

4 marks

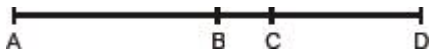
Q9. In the figure, A, B, C and D are four points on a circle. AC and BD intersect at a point E such that ∠BEC = 130° and ∠ECD = 20°.

Find ∠BAC.



4 marks

Q 10 In the figure, given below, if AC = BD, then prove that AB = CD.



3 marks

Q 11 If AB=x+3, BC= 2x and AC= 4x-5, then what will be the measure of x, if B lies on AC?

3 marks