Maths Revision Test 4

Time : 45 mins

Max Marks : 30

Q1. **1.** Find the remainder when $x^3 + 3x^2 + 3x + 1$ is divided by

(i) $x + 1$

(ii) $x - \frac{1}{2}$

. 1 mark

(b) Factorize. $x^3 - 2x^2 - x + 2$ 1 marks

Q2. Evaluate the following products without multiplying directly:

(i) 103 × 107
(ii) 95 × 96

3 marks

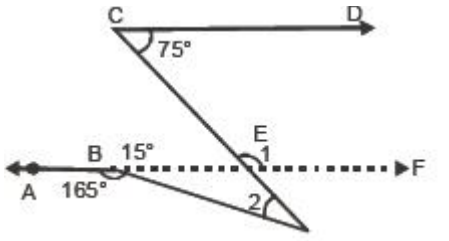
Q3. Determine the value of

A) Expand $(x + 2y + 4z)^2$

B) Expand $(2x + 1)^3$

4 marks

Q4 In the following figure AB || CD. Find the measure of ∠BOC.



3 marks

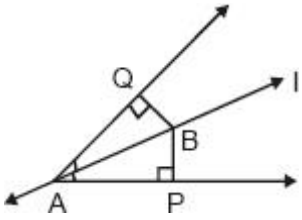
Q5 If PQ and RS are two intersecting lines which meet ar point O. If angle POR :angle ROQ= 5:7. Find all the angles.

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:

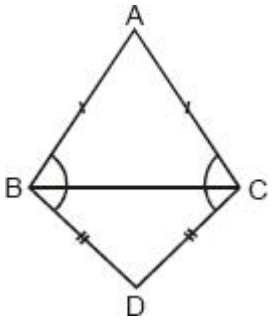
(i) ΔAPB ≅ ΔAQB

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



3 marks

Q7. ABC and DBC are two isosceles triangles on the same base BC (see figure). Show that ∠ABD = ∠ACD.



4 marks

Q8. Show that the diagonals of a square are equal and bisect each other at right angles.

4 marks

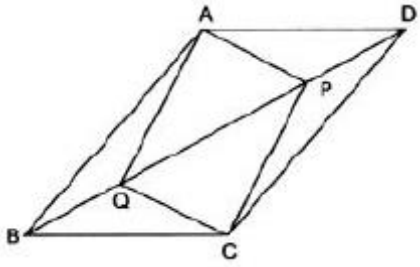
Q9. In parallelogram ABCD, two points P and Q are taken on diagonal BD such that DP = BQ (see figure). Show that:

(i) ΔAPD ≅ ΔCQB

(ii) AP = CQ

(iii) ΔAQB ≅ ΔCPD

(iv) AQ = CP



4 marks