** Learners’ Academy English School**

**Std:- X First Term Examination Total Marks -50**

**Date:-18/09/17 Subject –Maths Time –2 hour**

 **PART -B**

 **Section-A**

**Solve the following [2 marks each] (16)**

1. Find g.c.d of 120 and 23 by using Euclid algorithm.

2. If 5 is one of the zero of P(x) = 3x3-x2-ax-45 find a.

3. In $∆$ ABC the bisector of ⁄͟B intersect Ac in D. If AD/DC = 3/4 and AB =7.5 find BC.

OR

 Divide x3 +3x2- 7x-9 by x +1 by the method of synthetic division.

4. Find square root of 9+2√14.

5. $∆$ ABC AD is a median if AB = 6 AC = 8 AD = 5 find BC.

OR

 P is the exterior of circle at distance 34 from the centre o, A line through P touches the circle at Q. PQ = 16. Find the diameter of the circle.

6. Obtain a quadratic polynomial ax2+bx+c where the sum of zero is -3 and product of zero is -4.

7.In rectangle ABCD. AC = 25,and CD = 7 find the perimeter of rectangle.

8. A card is selected at random from a well shuffled pack of 52 cards. Find the probility. That the card is (i) Not a face card (b) An ace of red colour.

**Section-B**

**Solve the following. [3 marks each] (12)**

9. The sum of present age of a father and his son is 50 years. After the 5 years the age of the father become thrice the age of his son. Find their present age.

10.⁄͟B is a right angle in $∆$ ABC and BD is an attitude to hypotenuse. AB = 10 BC = 8 find area of $∆$ BDC.

11. Two concentric circle having radii 26 and 24 are give .the chord of the circle with larger radius touches the circle with smaller radius .find the length of the chord.

12. In ∆XYZ the bisector of ⁄͟ y intersect ZX in p.

(i) If XP : PZ = 4:5 and YZ=6.5 find XY

**Section-C**

**Solve the following [4 marks each] (12)**

13. The ratio of present age of mother and her daughter is 8:3, after 5 years the ratio of their age will be 9:4 find the present age.

OR

A card is selected at random from well shuffled pack of 52 cards. Find the probability that the selected card is

(a) A face card (b) of diamond (c) not an ace (d) is an ace of black colour

14. In $∆$ ABC AC +BC=28 ,AB=BC= 32and AC=AB=36. Determin $∆$ ABC is right angle triangle or not.

15. If √3 and -√3 are the zero of p(x) = x4+4x3-8x2-12x+15 find the remaining zeros.

**Section-D**

**Solve the following [5 marks each] (10)**

16. State the fundamental theorem of proportionality.

17. Marks obtain by 50 students from 100 as the following.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Marks |  0-34 |  35-50 |  51-70 |  71-90 |  91-100 |
| No of students |  8 |  9 |  14 |  11 |  8 |

Find the probability that the student get marks.

(i) below 34 (ii) between 71-90 (iii) more than 70 equal to 50 (iv) above 90

 Or

Divide the line segment into three part in the ratio 2:3:4 in the same order.

**All The Best**