ST. LAWRENCE HIGH SCHOOL

TOPIC –Theorems on Area

Subject : Mathematics **Class-9** **F. M. 15**

WORKSHEET NO.- 6 **Second term** **Date: 05.07.21**

Q.1) Choose the correct option: **(1x15=15)**

i) PQRS is a trapezium where PS II QR. X is the midpoint of SR. IF Δ XPS + Δ XQR = 30 sq.cm then the area of the trapezium PQRS will be _____

a) 40sq.cm b) 8sq.cm c)12sq.cm d)60sq.cm

ii) In a Δ ABC, D , E and F are the midpoints of the sides BC , CA and AB. If the area of Δ CDF is 7 sq. cm, then the area of ΔABC is _____

a) 24 sq. cm b)28 sq. cm c)30 sq. cm d)36 sq. cm

iii) In Δ PQR, S is the midpoint of QR. Also T, M and N are the midpoints of SR, RT and PM. If the area of Δ PQR is 7 sq. cm, then the area of Δ ABC will be

a)8 sq. cm b)28 sq. cm c)32 sq.cm d)64 sq.cm

iv)In a parallelogram ABCD, P is any point on the side AD. If the area of the parallelogram is 40 sq. cm, then the sum of the areas of Δ ABP and Δ DCP is _____

a)20 sq. cm b) 40 sq. cm c)60 sq. cm d) 25 sq. cm

v)ABCD is a trapezium whose AD II BC. If Δ ADB = 30 sq. cm, then Δ ADC will be _____, 1

a)20 sq. cm b)40 sq. cm c)25 sq. cm d)30 sq. cm

vi) The base of a parallelogram and a rectangle is 20 cm and they are situated between same parallels. If the area of the rectangle is 600 sq. cm, then the height of the parallelogram with respect to base is _____

a)12cm b)25 cm c) 30 cm d) 35 cm

vii)In Δ PQR, O is the midpoint on the side QR such that 2 QO = 3 OR. Then the ratio of the areas of Δ PQO and Δ POR is _____

a)2 : 1 b) 3 : 2 c)1 : 1 d)4 : 1

viii)In Δ ABC, D and E are such points of AB and AC that Δ DBC = Δ EBC. If BC = 12 cm, then DE =

a)4 cm b)12 cm c) 6 cm d)8 cm

ix) In trapezium ABCD, AD II BC and AD = ½BC.IfΔ ABC = 16 sq.cm then area of trapezium will be _____

a)24sq.cm b) 18 sq.cm c) 12 sq.cm d) 15 sq.cm

x) In trapezium ABCD, AD II BC. If P is the midpoint of DC then ΔPBC : area oftrapezium ABCD is

a)1 : 3 b)2 : 1 c)1 : 1 d)1 : 2

xi)Between the same base and same parallels, the area of the triangle will be _____the area of the parallelogram.

a) Thrice b)half c)equal d)twice

xii) Between the same base and same parallels, the area of a square and area of a rhombus are

a)equal b) twice c)half d) thrice

xiii) ABCD is a parallelogram. The midpoint of AD is P. If the area of the parallelogram is 48 sq. units, then the area ofΔACP is _____ sq. units.

a) 6 b) 9 c)3 d)12

xiv)The median of a triangle divides the triangle into two triangles of _____ area.

a)thrice b) equal c) half d)twice

xv)The area of a parallelogram ABCD is 32 sq. cm. E is the midpoint of the side BC. Area of Δ ABE is

a) 16 sq. cm b)20 sq. cm c)8sq. cm d) 4sq. cm

-ChaitaliRoy