



# ST. LAWRENCE HIGH SCHOOL



## TOPIC – Theorems on Concurrence and Construction

Subject : Mathematics

Class-9

F. M. 15

WORKSHEET NO. - 4

Second Term

Date: 16.11.2020

Q.1) Choose the correct option:

(1x15=15)

- i) G is the centroid of  $\Delta ABC$ . If area of  $\Delta GBC$  is 12 sq. cm, then the area of  $\Delta ABC$  is  
a) 24 sq. cm                      b) 6 sq. cm                      c) 36 sq. cm                      d) 12 sq. cm
- ii) If the length of circumradius of a right angled triangle is 5cm, then the length of hypotenuse is  
a) 2.5 cm                      b) 10 cm                      c) 5 cm                      d) 20 cm
- iii) The length of the circumradius of the triangle having sides 9cm, 12cm and 15 cm is  
a) 6 cm                      b) 9 cm                      c) 4.5 cm                      d) 7.5 cm
- iv) O is the circumcentre of the  $\Delta ABC$ . If  $\angle BOC = 100^\circ$ , then measure of  $\angle BAC$  is  
a)  $50^\circ$                       b)  $80^\circ$                       c)  $60^\circ$                       d)  $40^\circ$
- v) In the  $\Delta ABC$ , AD is a median and G is the centroid. If AG = 5 cm, then measure of GD is  
a) 3 cm                      b) 2 cm                      c) 10 cm                      d) 2.5 cm
- vi) O is the incentre of  $\Delta ABC$ . If  $\angle BAC = 30^\circ$ , then measure of  $\angle BOC$  is  
a)  $60^\circ$                       b)  $100^\circ$                       c)  $105^\circ$                       d)  $120^\circ$
- vii) In  $\Delta ABC$ ,  $\angle B$  is rt. angle. D is the midpoint of the side AC. If AB = 6cm and BC = 8cm, then length of BD is  
a) 3cm                      b) 4 cm                      c) 5cm                      d) 10 cm
- viii) G is the centroid of  $\Delta ABC$ . If AG = 8cm, then length of the median through A is  
a) 16 cm                      b) 12 cm                      c) 4 cm                      d) 8 cm
- ix) G is the centroid of  $\Delta ABC$ , and if CF is a median, then CF : CG is  
a) 3 : 2                      b) 2 : 3                      c) 2 : 1                      d) 1 : 2
- x) The incentre of a  $\Delta ABC$  is O. If  $\angle ABO = 40^\circ$  and  $\angle ACO = 30^\circ$ , then measure of  $\angle BOC$  is  
a)  $110^\circ$                       b)  $100^\circ$                       c)  $130^\circ$                       d)  $140^\circ$
- xi) In  $\Delta ABC$ , O is the orthocenter. If  $\angle BAC = 70^\circ$ , then measure of  $\angle BOC$  is  
a)  $110^\circ$                       b)  $120^\circ$                       c)  $140^\circ$                       d)  $90^\circ$
- xii) O is the orthocentre of  $\Delta ABC$ . If  $\angle BOC = 120^\circ$ , then measure of  $\angle ACO$  is  
a)  $30^\circ$                       b)  $40^\circ$                       c)  $50^\circ$                       d)  $60^\circ$
- xiii) At least how many conditions are needed to construct a triangle?  
a) 2                      b) 3                      c) 4                      d) 5
- xiv) At least how many conditions are needed to construct a quadrilateral?  
a) 2                      b) 3                      c) 4                      d) 5
- xv) The point of intersection of the medians of a triangle is called \_\_\_\_\_  
a) Incentre                      b) Orthocentre                      c) Centroid                      d) Circumcentre

-Chaitali Roy