



# ST. LAWRENCE HIGH SCHOOL



## A Jesuit Christian minority Institution

Subject: Mathematics

Class- X

Date:14/11/2020

### Answer key of Worksheet-3

#### Chapter- Similarity

#### Topic- application of theorems of similarity

---

1. Choose the correct alternative.  $1 \times 15 = 15$
- i) If in 2 triangles ABC and DEF we have  $AB/DE = BC/EF = AC/DF$  then ratio of perimeter of triangle ABC and DEF is i)  $\frac{1}{2}$  ii)  **$AB/DE$**  iii)  $BC/AC$  iv) none of these
- ii) If in 2 triangles ABC and DEF we have  $AB/DE = BC/EF = AC/DF$  then ratio of area of triangle ABC and DEF is i)  **$(AB/DE)^2$**  ii)  $(BC/EF)^2$  iii)  $(AC/DF)^2$  iv) all of the above
- iii) In ABC right triangle angle A is right angle, a perpendicular is drawn from A on BC at D point then i) triangle ABD is similar to triangle ACD ii) triangle ABD is similar to triangle ABC iii) triangle ACD is similar to triangle ABC iv) **all of the above**
- iv) In triangle ABC and DEF if  $AB/DE = BC/DF = AC/EF$  then i)  $LA = LD$  ii)  **$LB = LD$**  iii)  $LA = LF$  iv) none of these
- v) If in triangle MNO and PQR  $MN/PR = NO/RQ = MO/PQ$  then i)  **$LP = LM$**  ii)  $LM = LQ$  iii)  $LR = LO$  iv) none of these
- vi) In triangle DEF and PQR if  $LD = LQ$  and  $LR = LE$  then which one is not right?  
i)  $EF/PR = DF/PQ$  ii)  **$QR/PQ = EF/DF$**  iii)  $DE/QR = DF/PQ$  iv)  $EF/PR = DE/QR$
- vii) In ABC and DEF triangle  $\angle A = \angle E = 40^\circ$  and  $AB/DE = AC/EF$  and  $\angle F = 65^\circ$  then value of  $\angle B$  is i)  $65^\circ$  ii)  $35^\circ$  iii)  **$75^\circ$**  iv) none of these
- viii) In triangle PQR and XYZ  $PQ/XY = PR/XZ$ ,  $\angle P = \angle X = 30^\circ$  and  $\angle Y = 100^\circ$ . Then  $\angle Q$  is i)  $80^\circ$  ii)  **$100^\circ$**  iii)  $30^\circ$  iv) none of these

- ix) In triangle PQR and XYZ  $PQ/XY = PR/XZ$ ,  $\angle P = \angle X = 30^\circ$  and  $\angle Y = 100^\circ$ . Then  $\angle R$  is **i)  $50^\circ$**  ii)  $100^\circ$  iii)  $30^\circ$  iv) none of these
- x) In triangles ABC and PQR  $AB = a$  cm,  $BC = b$  cm,  $AC = c$  cm and In PQR triangle  $PQ = p$  cm,  $QR = q$  cm and  $PR = r$  cm. If  $a/p = b/q$  and  $\angle B = \angle Q$  then  $(a+b+c)/(p+q+r) =$  \_\_\_\_\_ i)  $a/p$  ii)  $c/r$  iii)  $p/q$  **iv) both (1) and (2)**
- xi) If ratio of corresponding sides of 2 triangles PQR and XYZ is  $3/7$ , then ratio of area of PQR and XYZ is i)  $7/3$  ii)  $3/7$  **iii)  $9/49$**  iv)  $49/3$
- xii) In triangle ABC,  $\angle B = 90^\circ$ , from B a perpendicular is drawn on AC at point D.  $BD = 8$  cm,  $AD = 5$  cm. Find CD **i)  $12.8$  cm** ii)  $15$  cm iii)  $12$  cm iv) none of these
- xiii) In ABC triangle,  $\angle B = 90^\circ$  and BD is perpendicular on AC. If  $AD = 4$  cm and  $CD = 16$  cm. Find BD i)  $10$  cm ii)  $6$  cm iii)  $5$  cm **iv)  $8$  cm**
- xiv) In ABC triangle,  $\angle B = 90^\circ$  and BD is perpendicular on AC. If  $AD = 4$  cm and  $CD = 16$  cm. then **i)  $2AB = BC$**  ii)  $2BC = AB$  iii)  $AD = 2CD$  iv) none of these
- xv) In ABC triangle,  $\angle B = 90^\circ$  and BD is perpendicular on AC. If  $AD = 4$  cm and  $CD = 16$  cm. Find AB. i)  $2\sqrt{5}$  cm **ii)  $4\sqrt{5}$  cm** iii)  $6\sqrt{5}$  cm iv) none of these

Aparajita Mondal