ST. LAWRENCE HIGH SCHOOL

FOR GOD AND COUNTRY

A Jesuit Christian minority Institution

Subject: MathematicsClass- XI **Date:9/11/2020**

Answer key of Worksheet-2

Chapter- Similarity

Topic- Thales theorem and its application

---

1. Choose the correct alternative. 1x15=15

a)AD= x+3, BD= 3x+19 , AE=x, EC= 3x +4 in triangle ABC where DE is parallel to BC. Find x.

i) 4 ii) 1 iii) 3 iv)2

b) The straight line parallel to the parallel sides of a trapezium divides other two sides i) equally ii) proportionally iii) in 2:1 ratio iv) none of these

c)If in triangle ABC , DE is parallel to BC and AD:BD=3:5 then write the ratio of area of triangle ADE and that of triangle CDE .

i) 3:5 ii) 5:3 iii) 2:5 iv) none of these

d)In triangle CAB, LM is parallel to AB, AL= x-3 units ,AC= 2x units , BM=x-2 units , BC= 2x+3 units , find x i) 6 ii) 8 iii) 4 iv) 9

e)If two triangles are similar then their corresponding sides are _____.

i) proportional ii) congruent iii) equal iv) none of these

f)If the sides of two triangles are in the same ratio, then their corresponding angles are_____ i) proportional ii) equal iii) double iv) none of these

g)If in two triangles, an angle of one triangle is equal to an angle of another triangle and the adjacent sides of the angle are proportional, then two triangles are _____. i) similar ii) congruent iii) both iv) none of these

h) If in two triangles all the angles are equal , sides of the first triangle are 4 cm, 5 cm and 7 cm then corresponding sides sides of the other triangle are 12 cm , 15 cm and _____. i) 18 cm ii) 14 cm iii) 24 cm iv) 21 cm

i)Perimeter of two similar triangles are also _____ to the corresponding sides of the triangles. i) equal ii) proportional iii) congruent iv) none of these

j)In two right triangles if perpendicular and base of one triangle are in proportion to the perpendicular and base of the other ,then they are _____triangles.
i) congruent ii) similar iii) both iv) none of these
k) AB is a diameter of a circle , P is a point on the circumference of the circle. PN is a perpendicular drawn on AB. Then i) $PB^2 = AB.\ BN$ ii) $PB^2 = AP.PN$ iii) $PB^2 = PN.NB$ iv) none of these
l) ABCD is a cyclic quadrilateral . side AB and CD are extended and met at the point then ,i) PB . PC= PA. PD ii) PA.PB=PC.PD iii) PA.PD= PB.PC iv) none of these
m)In triangle XYZ , XY= 4.2 cm, YZ=7 cm XZ= 5.2 cm cm and in triangle ABC , AB= 14 cm, BC= 8.4 cm find AC if XYZ and ABC are similar triangles.
i) 10. 6 cm ii) 10.4 cm iii) 10.8 cm iv) none of these
n) In triangle ABC ∠ ABC=90°,AB= 8 units and BC= 6 units . In triangle PQR , angle PQR= 90° , PQ= 3 unnits and QR= 4 units .Then ABC and PQR are _____triangle.
i) congruent ii) similar iii) both iv) none of these
o)in triangle ABC, AB= 5 cm , BC= 4 cm , AC= 7 cm , angle ABC=85°, angle BCA=40°. In triangle PQR, PQ= 8 cm, PR= 10 cm and QR= 14 cm ,Find angle RPQ
i) 40° ii) 55° iii) 65° iv) 85°

Aparajita Mondal