



TOPIC- Theorems on Area

Sub: Mathematics

Class-9

F.M. -15.

Work Sheet -27

Date: 14.5.2020

1. Choose the correct options :

- (i) The area of the parallelogram ABCD is 32 sq cm . E is the mid point of the side BC. Area of triangle ABE will be ____ sq cm.
a) 16 b) 20 c) 4 d) 8
- (ii) In triangle ABC , P is the mid point of median AD. If the area of triangle ABC is 24 sq cm, then the area of the triangle BPD is :
a) 4 sq cm b) 8 sq cm c) 12 sq cm d) 6 sq cm.
- (iii) ABCD is a parallelogram . E and F are the mid points of AB and DC. Ratio of the areas of the quadrilateral BCFE and triangle BCD is :
a) 2:1 b) 3:2 c) 1:1 d) 4:1
- (iv) In triangle ABC , D is the mid point of the side BC. From the point D ,DE is perpendicular on AB. If $AE=2EB$ and area of triangle ABC is 36 sqcm then area of triangle ADE is :
a) 18 sq cm b) 14sq cm c) 9 sq cm d) 12 sq cm.
- (v) G is the centroid of triangle ABC and D is the mid point of BC. If the area of triangle GBD is 8 sq cm then area of triangle ABC will be ____ sq cm.
a) 24 b) 32 c) 48 d) 64
- (vi) In a right angled triangle ABC, $\angle B = 90^\circ$ the base BC is 15m, hypotenuse AC =17m. Then the area of the triangle is :
a) 30 sq m b) 40 sq m c) 60 sq m d) 120 sq m
- (vii) ABCD is a parallelogram and F is the mid point of DE. If area of triangle ABD is 28 sqcm then area of triangle AEF is :
a) 12 sq cm b)14 sq cm c) 7 sq cm d) 21sq cm.
- (viii) AD is a median of triangle ABC. If area of triangle ABD is 'a' sqcm and the area of triangle ABC is 'b' sqcm then
a) $a=2b$ b) $a=b$ c) $b=2a$ d) $b=3a$
- (ix) If the area of a square is equal to the area of such a triangle whose area is 81 sq cm, then the length of each side of the square will be :
a)6 cm b)9 cm c)3 cm d) 12 cm
- (x) The point of intersection of the medians of a triangle ABC is G. If the area of the triangle is 60 sq cm then the area of triangle GBC will be ____ sq cm.
a) 10 b) 20 c) 30 d)40

- (xi) In a triangle ABC, D, E, F are the mid points of the sides BC, CA, and AB. If the area of triangle CDF is 7 sq cm then the area of triangle ABC is _____ sq cm.
a) 7 b) 14 c) 21 d) 28
- (xii) In triangle PQR, O is a point on the side QR such that $2QO=3OR$. Then the ratio of the areas of triangle PQO and triangle POR is :
a) 2:3 b) 3:2 c) 1:3 d) 3:1
- (xiii) In triangle ABC, D and E are such points on AB and AC that triangle DBC = triangle EBC. If $BC=12$ cm then $DE =$ _____.
a) 12 cm b) 10 cm c) 6 cm d) 3 cm.
- (xiv) Between the same base and same parallels, the area of the triangle will be ____ of the area of the parallelogram.
a) equal b) half c) one-third d) one-fourth.
- (xv) The median of a triangle divides the triangle into _____ triangles of equal area.
a) two b) three c) four d) six.

Debjani Das.