



TOPIC- Theorems on Area

Sub: Mathematics

Class-9

F.M. -15.

Work Sheet -29

Date: 16.5.2020

1. Choose the correct options :

- (i) BE and CD are the two medians of triangle ABC. If the area of triangle ACD is 10 sq cm then the area of triangle BCE will be _____ sq cm.
a) 12 b) 10 c) 20 d) 30
- (ii) ABCD is a parallelogram and ABCE is a quadrilateral. If the diagonal AC bisects the quadrilateral then AC ___ DE.
a) perpendicular b) parallel c) none of these.
- (iii) P is any point on the median AD of the triangle ABC. Then triangle APB ___ triangle APC.
a) greater b) less c) equal d) none of these.
- (iv) In triangle ABC , D and E are the mid points of AB and AC. Then triangle ADE = ___ triangle ABC.
a) 1/2 b) 1/3 c) 1/4 d) 1/5
- (v) In triangle ABC, the mid points of AB and BC are P and Q. If area of triangle ABC is 60 sq cm then the area of triangle APQ is :
a) 10 sq cm b) 20 sq cm c) 30 sq cm d) 15 sq cm.
- (vi) If BE and CF are two medians of the triangle ABC, then FE ___ BC.
a) equal b) perpendicular c) parallel d) none of these.
- (vii) If P is any point on the diagonal BD of the parallelogram ABCD then triangle APD ___ triangle CPD.
a) greater b) less c) equal
- (viii) In trapezium ABCD, AD || BC and AD=1/2 BC. If triangle ABC = 16 sq cm then the area of the trapezium will be _____ sq cm.
a)12 b)16 c)24 d)32
- (ix) In trapezium ABCD, AB || DC. If the diagonals AC and BD intersect at O ,then triangle AOD is _____ triangle BOC.
a) > b) < c) = d) none of these.
- (x) ABCD is a parallelogram. E is any point on side DC . If extended AE intersects BC at point F then triangle ADF ___ triangle ABE.
a) less than b) greater than c) equal to d) none of these.

- (xi) In the quadrilateral ABCD, $AD=BC$ and $\angle BAD = \angle ABC$. Then the quadrilateral ABCD is _____.
- a) rectangle b) rhombus c) square d) isosceles trapezium.
- (xii) T is any point on QR of the parallelogram PQRS. If area of triangles PQT and STR are 16 sq cm and 20 sq cm then BP:PC will be :
- a) 1:2 b) 1:3 c) 2:3 d) 4:5
- (xiii) O is any point within the equilateral triangle ABC. From the point O perpendiculars OD, OE and OF are drawn on BC, AC, and AB, Then height of the triangle =
- a) OD+OE b) OD+OF c) OE+OF d) OD+OE+OF.
- (xiv) In triangle ABC, D, E and F are the mid points of BC, AC and AB respectively. Then area of triangle DEF is _____ of triangle ABC.
- a) $\frac{1}{3}$ b) $\frac{1}{4}$ c) $\frac{1}{6}$ d) $\frac{1}{8}$
- (xv) If a parallelogram, a rectangle and a triangle are on the same base and between the same parallels and their areas are P, R and T then
- a) $P=R=T$ b) $P=R=T/2$ c) $2T=P=R$ d) $P=2R=T$

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