WEBINAR CLASSES FOR CAT

ELITES GRID

GEOMETRY ASSIGNMENT 2(BASICS OF MEDIAN & ANGLE BISECTOR)

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Q1 - Find Length of smallest median of triangle with side length 3,4,5

Q2-Semi perimeter of a right angled triangle is 154 cm and smallest median is 72 cm. Find the area of triangle

Q3-ABC is a triangle where AB = 4, the median AD = 1, then find the minimum value of the angle BAC?

Q4-In triangle ABC, AD is the median. Bisectors of angle BDA and ADC meet AB and AC at E and F respectively. If AE:EB=3:4, find EF:BC

Q5-The shortest median of a right angled triangle is 25 . If the area of the triangle is 336 . What is the length of the longest median of the triangle

Q6- All the three medians of a triangle are even integers, if the two medians are 8 and 2, how many values third median can take ??

Q7- In a triangle ABC the internal bisector of the angle A meets BC at D . If AB= 2 sqrt3 , AC=4 sqrt3 and angle A=60 Find length of AD

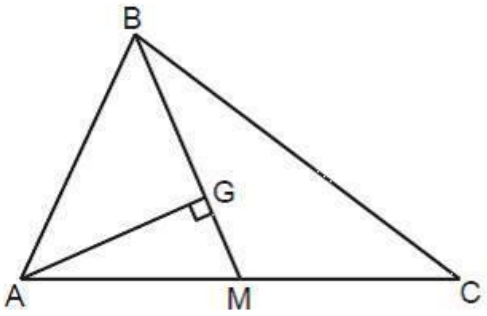
Q8- ABC is an isosceles triangle with AC = BC . The median AD and BE are perpendicular. To each other and intersect at G . If GD = 5 unit , find the area of the quadrilateral CDGE.

Q9- A triangle, whose sides are 20 cm, 48 cm and 52 cm, is to be cut into two pieces of equal area by a single straight cut, which passes through one of the vertices of the triangle. What is the approximate maximum value of the sum of the perimeters of the two pieces.

Q10 - In triangle, ABC medians AD and BE are perpendicular to each other. If AC=10, BC=8 find AB ?

Q11-The lengths of 3 medians of a triangle are 9, 12, 15. The area of the triangle is ?

Q12 -If G is the centroid of triangle ABC and BC = 2AG, find angle MBC.



Q13. In a ΔABC, AD & BE are medians and G is the centroid, ∠AGE = 30° , AD=12cm & BE= 18cm, Find the area of the triangle?

Q14. If 3 sides of triangle abc are bc =20, ac=21, ab=29 internal bisectors of angle A meets at BC at P passing through incenter O. What is the ratio PO : OA ?

Q15. ΔABC is right angled at B. AC = 12 cm and angle ACB = 30°. O is incenter of ΔABC then find the distance OB.

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Q16 -If the circumradius of a right angled triangle with a perimeter of 180 cm is 41 cm . Find the area of triangle

Q17. Bisector of angle A in triangle ABC meets BC at U. If UX is drawn parallel to AC meeting AB at X, and UY drawn parallel to AB meets AC at Y. Find BX : CY if AB = 10 and AC = 20

Q18. Let ABC be a triangle in which AB = AC and let I be its in-centre. Suppose BC = AB + AI. Find angle BAC

Q19. find radius of circle inscribed in rhombus of diagonal length 3 and 4.

Q20-If 55 & 48 are the lengths of diagonals of a rhombus and P is the perpendicular height of rhombus then what is the range of P

a) $33 < p < 34$

b) $34 < p < 35$

c) $35 < p < 36$

d) $36 < p < 37$

ANSWER KEYS

BEFORE CHECKING ANSWER KEYS – TRY QUESTIONS ATLEAST 2-3 TIMES

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1) 2.5

2) 1540

3) 150

4) 3:7

5) √2353

6) 1

7) 4

8) 50

9) 218

10)2 sqrt (41/5)

11) 72

12) 30

13) 72

14) 2:5

15) (3√3-3)√2cm

16) 720

17) 1:4

18) 90

19) 1.2

20) 36 < p < 37

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