Triangle

1. 70 sticks each of unit length are combined to form a right angle triangle without breaking any sticks. What is the area (in square units) of the triangle?
(A) 210 **(B)** 180
(C) 240 **(D)** 350

2. The side of an equilateral triangle is 4 cm. What is its area?
(A) $8\sqrt{3}$ cm^2 **(B)** $6\sqrt{3}$ cm^2
(C) $9\sqrt{3}$ cm **(D)** $4\sqrt{3}$ cm^2

3. If the height of an equilateral triangle is $20\sqrt{2}$ cm, then what is its area (in cm^2)?
(A) $\frac{800}{3}$ cm^2 **(B)** $\frac{1}{3}400\sqrt{3}$ cm^2
(C) $\frac{1}{3}800\sqrt{3}$ cm^2 **(D)** $\frac{400}{3}$ cm^2

4. What is the area of a triangle whose sides are 7 cm, 24 cm and 25 cm?
(A) 72 cm^2 **(B)** 108 cm^2
(C) 84 cm^2 **(D)** 42 cm^2

5. The base and hypotenuse of a right angles triangle are 9 cm and 41 cm respectively. What is the area of the triangle?
(A) 180 cm^2 **(B)** 170 cm^2
(C) 190 cm^2 **(D)** 160 cm^2

6. The sides of an isosceles triangles are 10 cm, 10 cm and 12 cm. What is the area of the triangle?
(A) 60 cm^2 **(B)** 48 cm^2
(C) 40 cm^2 **(D)** 44 cm^2

7. If in a triangle, angles are in the ratio 1:1:2 and the length of its longest side is $6\sqrt{2}$ cm, then what is the Area (in cm^2) of the triangle?
(A) $18\sqrt{2}$ cm^2 **(B)** 18 cm^2
(C) 36 cm^2 **(D)** $36\sqrt{2}$ cm^2

8. The side of an equilateral triangle is equal to the diagonal of the square. If the side of the square is 12 cm, then what is the area of the equilateral triangle?
(A) $50\sqrt{2}$
(B) $50\sqrt{3}$
(C) $72\sqrt{3}$
(D) $100\sqrt{3}$

9. The side of an equilateral triangle is equal to the diagonal of the square. If the side of the square is 10 cm, then what is the area of the equilateral triangle?
(A) $50\sqrt{2}$ cm^2 **(B)** $50\sqrt{3}$ cm^2
(C) $100\sqrt{2}$ cm^2 **(D)** $100\sqrt{3}$ cm^2

10. What is the area (in cm^2) of an equilateral triangle whose side is 8 cm?
(A) $16\sqrt{3}$ cm^2 **(B)** $15\sqrt{3}$ cm^2
(C) 16 cm^2 **(D)** 45 cm^2

11. In ΔABC, point D is on the side A B such that BD = 2 cm and DA = 3 cm. The point E on BC is such that DE || AC and AC = 4 cm. So the area of ΔBDE): (Area of trapezium ACED) is-
(A) 4 : 21 **(B)** 2 : 5
(C) 1 : 5 **(D)** 4 : 25

12. The sides AB and AC of ΔABC are extended to the points D and E respectively. The bisectors of $\angle CBD$ and $\angle BCE$ meet at the P point. If $\angle A = 72°$, then the measure of $\angle P$ is:
(A) 36° **(B)** 45°
(C) 60° **(D)** 54°

13. In ΔABC bisectors of $\angle B$ and $\angle C$ divide each at point D. If $\angle BDC = 104°$ then what is the value of $\angle A$?
(A) 40 **(B)** 4813
(C) 50 **(D)** 4623

14. In ΔABC, D and E are the points on sides AC and AB, respectively, such that ∠ADE=∠B. If AD = 7.6 cm, AE = 7.2cm, BE = 4.2cm and BC = 8.4cm, then DE is equal to:
(A) 6.3cm **(B)** 5.8cm
(C) 7.4cm **(D)** 5.6cm

15. Let, ΔABC~ΔQPR and area Δ ABC Area/ ΔQPR=916 . If, AB = 12cm, BC = 6cm and AC = 9cm, then QP is equal to:
(A) 16 cm **(B)** 9 cm
(C) 12 cm **(D)** 8 cm

16. In ΔABC, AD⊥BC at D and AE is the Bisector of ∠A. If ∠B = 72° and ∠C = 26°, then what is the measure of ∠DAE ?
(A) 23° **(B)** 25°
(C) 49° **(D)** 37°

17. In ΔABC , ∠A = 90°. If BL and CM are the medians, then:
(A) $4(BL^2 + CM^2) = 3\ BC^2$
(B) $4(BL^2 + CM^2) = 5\ BC^2$
(C) $3(BL^2 + CM^2) = 4\ BC^2$
(D) $5(BL^2 + CM^2) = 4\ BC^2$

18. Let ΔABC~ΔQPR and ar (ΔABC)/ar (ΔPQR) = 9/16 . If AB = 12 cm, BC = 6 cm and AC = 9 cm, then QR is equal to:
(A) 12 cm **(B)** 16 cm
(C) 8 cm **(D)** 9 cm

19. If one of the angles of a triangle is 64°, then the angle between the bisectors 0f the other two interior angles is:
(A) 100° **(B)** 122°
(C) 96° **(D)** 112°

20. In ΔABC , AD, the bisector of ∠A , meets BC at D. If BC = a, AC = b and AB = c, then BD–DC =?
(A) $\frac{ac}{b+c}$ **(B)** $\frac{a(c+b)}{c-b}$
(C) $\frac{a(c-b)}{c+b}$ **(D)** $\frac{ab}{b+c}$