RIGHT ANGLE

1.In ABC is a right angled triangle with AC as its hypotenuse, then which one of the following is correct?

A) $AC^3 < AB^3 + BC^3$ B) $AC^3 > AB^3 + BC^3$

C) $AC^3 \leq AB^3 + BC^3$ D) $AC^3 \geq AB^3 + BC^3$

2.If the sides of a right angled triangle are three consecutive integers, then the length of the smallest side is?

A) 3 units B) 2 units C) 4 units D) 5 units

3.In a right angled triangle ABC, $\angle B = 90°,\ AB = 9cm,\ BC = 12\ cm$ **then find the radius of the circumcirle?**

A) 15 B) 7.5 C) 6.5 D) 9

4. If the sides of a triangle are 3cm, 4cm, and 5cm then find the distance between Incenter and circumcenter?

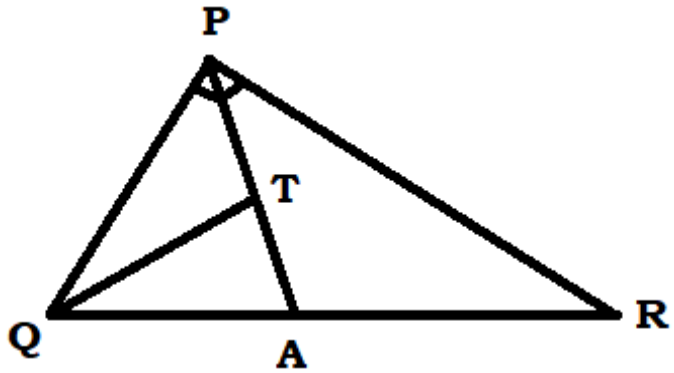
A) $\frac{\sqrt{3}}{2}$ B) $\sqrt{3}$ C) $\sqrt{5}$ D) $\frac{\sqrt{5}}{2}$

5.If the perimeter of a right angle triangle is 144cm and its circumradius is 32.5 cm. Find its area?

A) $504\ cm^2$ B) $520\ cm^2$

C) $512\ cm^2$ D) None of these

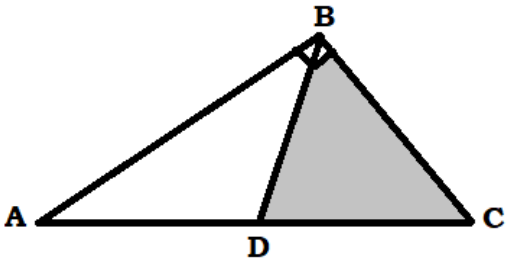
6.PQR is a triangle in which $\angle QPR = 90°,\ PQ = 24cm, PR = 32cm$ **and QA = AR, QT is an angle bisector of** $\angle PQR$. **Find PT ?**



CHANDAN LOGICS
9676578793,9494558793

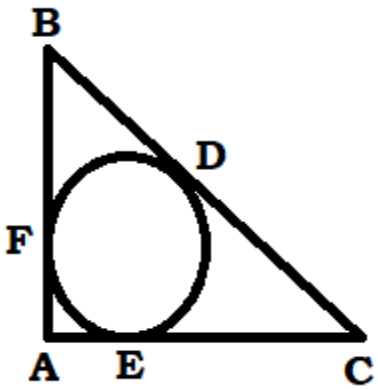
A) $\frac{100}{11}$ B) $\frac{140}{11}$ C) $\frac{130}{11}$ D) $\frac{120}{11}$

7.In the given figure, ABC is a right angle triangle at B, D is a point on AC such that DC = 11, AD = 31 and
BD = 17, find the area of shaded region ?



A) $84cm^2$ B) $96.8cm^2$ C) $92.4cm^2$ D) $88cm^2$

8.In the given diagram, an incircle DEF is circumscribed by the right angled triangle in which AF = 6 cm and EC = 15 cm. Then find the difference between CD and BD ?

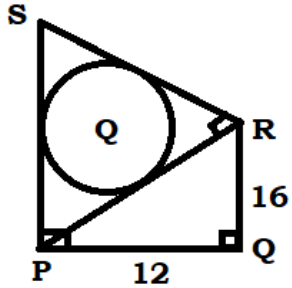


A) 1cm B) 3cm C) 4 cm D) 5 cm

9. ABC is a right angle triangle in which $\angle B = 90°$ Incircle of a triangle touches the hypotenuse AC at point E. If AE = 7 cm, EC = 8 cm, then find the area of triangle ABC?

A) $56\ cm^2$ B) $42\ cm^2$ C) $64\ cm^2$ D) $48\ cm^2$

10.In the given figure, PQ = 12 cm, QR = 16 cm and $\angle PQR = \angle SPQ = \angle PRS = 90°$ then find the radius circle?

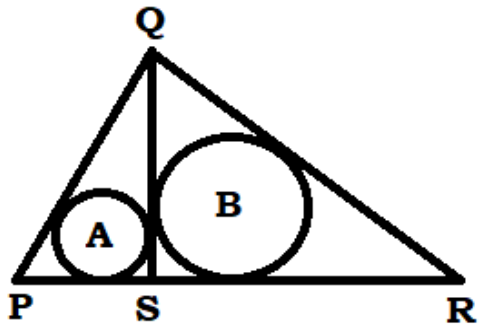


A) 4 B) 5 C) 6 D) 20/3

11.If the Inradius and circumradius of a triangle are 2cm and 6.5 cm respectively then find the area of triangle ?

A) $26\ cm^2$ B) $30\ cm^2$ C) $36\ cm^2$ D) $13\ cm^2$

12.In the given figure PQR is a right angled triangle in which $\angle PQR = 90$, $PQ = 15cm$, QR = 20 cm. QS is the altitude on hypotenuse PR. Circles are inscribed with in the ΔPSQ & QSR. A and B are the centres of circle. What is the distance between A and B ?



A) $\sqrt{65}$ B) $\sqrt{50}$ C) 7 D) 8

13.An isosceles triangle ABC is right-angled at B, D is a point inside the triangle ABC. P and Q are the feet of the perpendiculars drawn from D on the sides AB and AC respectively of ΔABC. If AP = a cm, AQ = b cm and BAD = 15°, sin 75° =

A) $\frac{2b}{\sqrt{3a}}$ B) $\frac{2a}{\sqrt{3b}}$ C) $\frac{\sqrt{3a}}{2b}$ D) $\frac{a}{2b}$

14. ABC is a right angled triangle, right angled at C and p is the length of the perpendicular from C on AB. If a, b and c are the length of the sides BC, CA and AB respectively, then

A) $\frac{1}{p^2} = \frac{1}{b^2} - \frac{1}{a^2}$ B) $\frac{1}{p^2} = \frac{1}{b^2} + \frac{1}{a^2}$

C) $\frac{1}{p^2} + \frac{1}{a^2} = \frac{1}{b^2}$ D) $\frac{1}{p^2} = \frac{1}{a^2} - \frac{1}{b^2}$

CHANDAN LOGICS
9676578793,9494558793

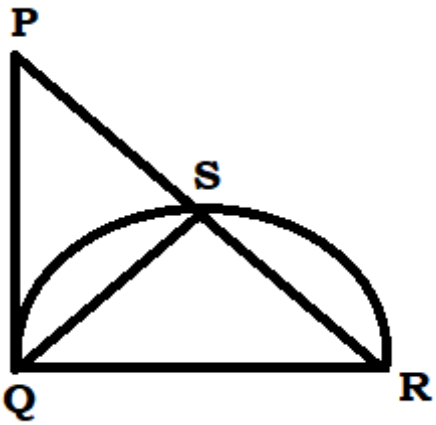
15.In triangle ABC, $\angle BAC = 90°$ and AD is drawn perpendicular to BC. If BD = 7 cm and CD = 28 cm. What is the length (in cm) of AD?

A) 3.5 B) 7 C) 10.5 D) 14

16. Let ABC be a right angled triangle with BC as hypotenuse, length of AB and AC are 15km and 20km, respectively. The minimum possible time, (in minutes), required to reach the hypotenuse from A at a speed of 30km/hr is ?

A) 24 B) 25 C) 21 D) 18

17. In the given figure, triangle PQR is a right angled triangle at Q. If PQ = 35 cm and PS = 21 cm, the what is the value (in cm) of radius of semicircle?



A) 24.5 B) 23.33 C) 25.66 D) 22.22

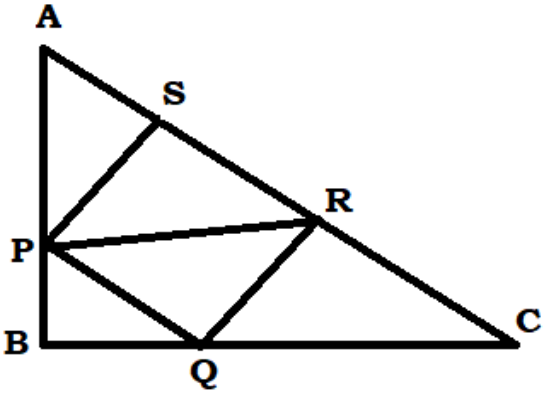
18.In $\Delta ABC, \angle B = 90°, BD \perp AC.$ If AB = 3cm, BC = 4cm, then AD : DC = ?

A) 3:4 B) 4:3 C) 9:16 D) 16:9

19.In $\Delta ABC, BD \perp AC.$ If AB = 6cm, BC = 8cm then find the area of triangle ABD ? (here 'D' is a point on AC, $\angle B = 90°$)

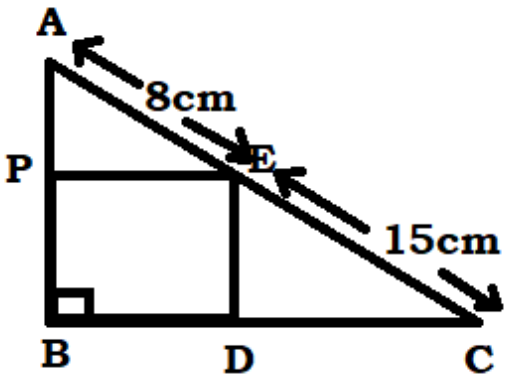
A) $\frac{216}{25}$ B) $\frac{194}{25}$ C) $\frac{206}{25}$ D) $\frac{256}{25}$

20.Triangle ABC is right angled at B. It side AB = 24 cm, BC = 32. A square PQRS is made on hypotenuse AC as shown in figure. Find the diagonal of square PQRS ?



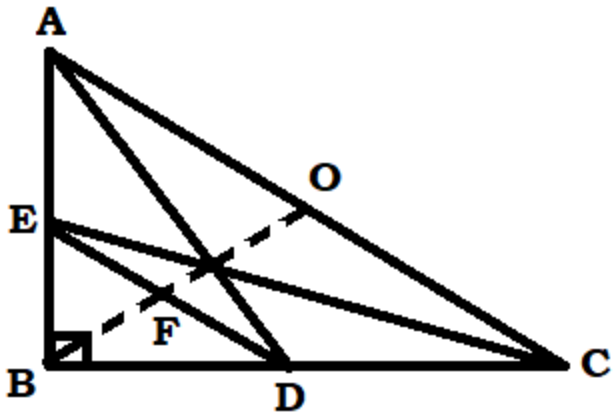
A) $\frac{475\sqrt{2}}{37}$ B) $\frac{480\sqrt{2}}{37}$ C) $\frac{512\sqrt{2}}{49}$ D) $\frac{225\sqrt{2}}{27}$

21.In this figure find the perimeter of square BDEF inscribed in right angle ΔABC ?



A) $\frac{720}{23}$ cm B) $\frac{480}{17}$ cm C) $8\sqrt{30}$ cm D) $\frac{450}{17}$ cm

22. In the right angle triangle ABC, $\angle B = 90°$, median AD and CE intersect each other at point O. If AD = 66 cm, CE = 57 cm then find the perimeter of triangle ODE and also find OF ?

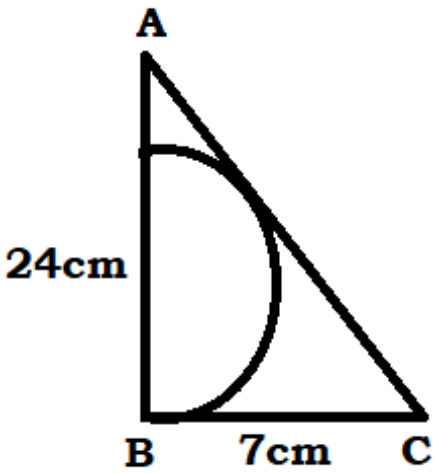


A) 78cm B) 84cm C) 80cm D) 82cm

23. In a triangle ABC, $\angle A = 90°$, BP and CQ are two medians. Then the value of $\frac{BP^2 + CQ^2}{BC^2}$ is

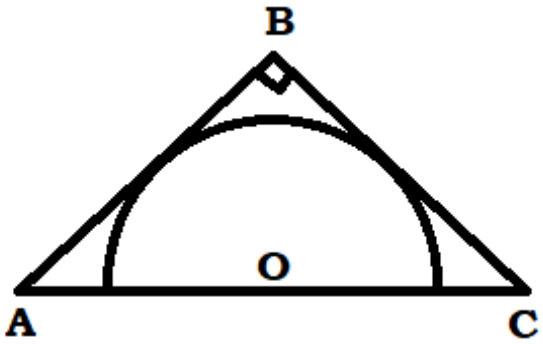
A) $\frac{4}{5}$ B) $\frac{5}{4}$ C) $\frac{3}{4}$ D) $\frac{3}{5}$

24. Find the Radius of semicircle? $(\angle B = 90)$



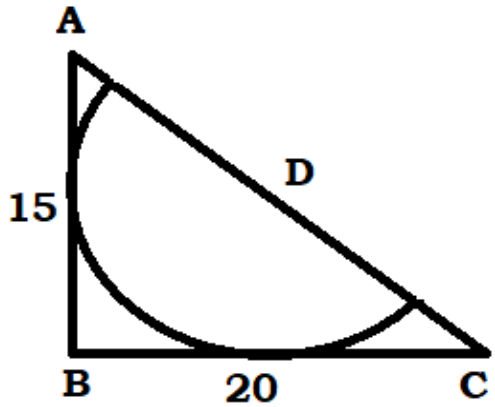
A) 6.25cm **B) 5.25cm** **C) 6cm** **D) 8.25cm**

25. In the given figure ABC is right angle triangle, right angled at B. A semicircle is drawn inside the triangle. Find the radius of semicircle? (AO = 3cm and OC = 4 cm)



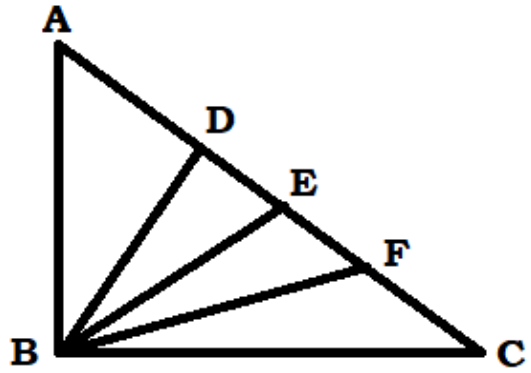
A) 2.4 **B)** $2\sqrt{3}$ **C) 3.5** **D) 24/7**

26. Find Radius of semicircle? $(\angle B = 90)$



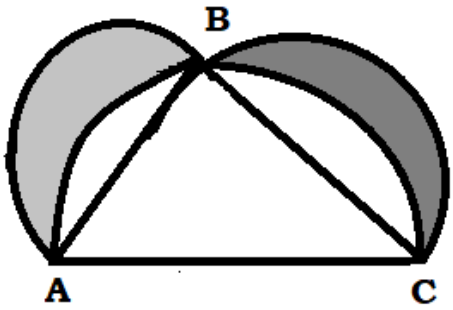
A) 12 **B) 60/7** **C) 10** **D) 7.5**

27.In the figure given below,ABC is a right angled triangle with hypotenuse AC = 100cm, AC is divided into four segments AD, DE, EF and FC such that AD = DE = EF = FC. What is the value of $BD^2 + BE^2 + BF^2$?



A) 8000 **B) 8750** **C) 10000** **D) 9250**

28. In the figure 3 semicircles are drawn on three sides of ΔABC. AB = 21 cm, BC = 28 cm and AC = 35 cm. What is the area of shaded part ?



A) 588 **B) 324** **C) 294** **D) 286**