

Quant Mega Quiz for SSC Tier-1

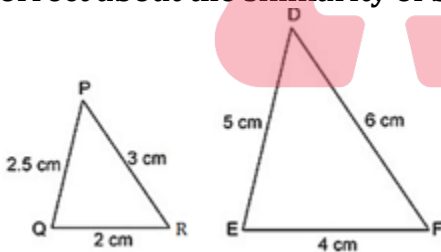
Q1. Maximum value of $(\cos\theta - \sin\theta)$ is:

- (a) $\frac{1}{\sqrt{2}}$
 (b) $\frac{1}{2}$
 (c) 2
 (d) $\sqrt{2}$

Q2. A man sells an article at 5% above its cost price. If he had bought it at 5% less than what he had paid for it and sold it for Rs 3 less, he would have gained 10%. The cost price of the article is

- (a) Rs 600
 (b) Rs 400
 (c) Rs 200
 (d) Rs 100

Q3. Consider the following figure shown below and choose which of the following equation is correct about the similarity of both triangles?



- (a) $\Delta PQR \sim \Delta EFD$
 (b) $\Delta PQR \sim \Delta DEF$
 (c) $\Delta PQR \sim \Delta FDE$
 (d) $\Delta RQP \sim \Delta DFE$

Q4. A cyclist travels 600 km in 8 hours, then he changes his speed and travels 420 km in 6 hours. Then find his latter speed is how much percent less than the first former?

- (a) $16\frac{2}{3}\%$
 (b) 12%
 (c) $6\frac{2}{3}\%$
 (d) $8\frac{1}{3}\%$

Q5.

The value of following is

$$\cos 24^\circ + \cos 55^\circ + \cos 125^\circ + \cos 204^\circ + \cos 300^\circ$$

- (a) $-1/2$
- (b) $1/2$
- (c) 2
- (d) 1

Q6. A person buys 18 tickets for Rs. 110. Each first class ticket costs Rs. 10 and each second class ticket costs Rs. 3. What will another lot of 18 tickets in which the number of first class and second class tickets are interchanged cost?

- (a) 112
- (b) 118
- (c) 121
- (d) 124

Q7. In an isosceles triangle DEF, $\angle D = 110^\circ$. If I is the incentre of the triangle, then what is the value (in degrees) of $\angle EIF$?

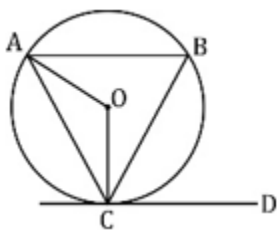
- (a) 110
- (b) 130
- (c) 145
- (d) 155

Q8. In the following figure, O is the centre of the circle and $\angle PRQ = 50^\circ$. What is the value (in degrees) of $\angle PTQ$?

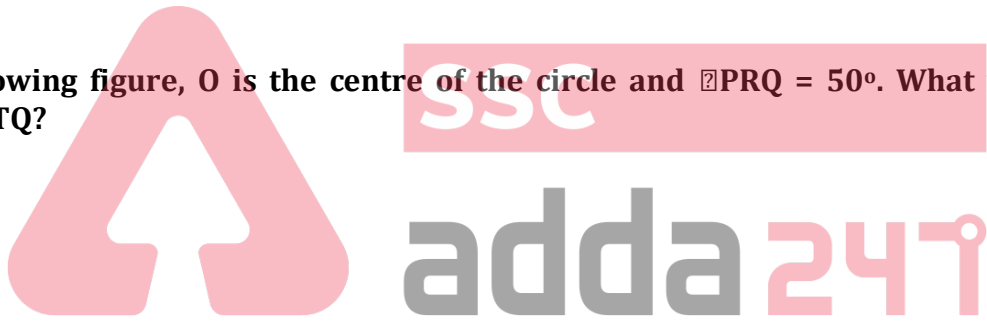


- (a) 100
- (b) 75
- (c) 130
- (d) 150

Q9. In the given diagram O is the centre of the circle and CD is a tangent. $\angle CAB$ and $\angle ACD$ are supplementary to each other $\angle OAC = 30^\circ$. Find the value of $\angle OCB$:



- (a) 30°
- (b) 20°
- (c) 60°
- (d) None of the above



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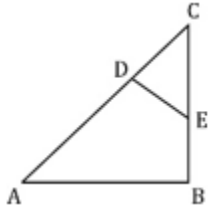


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Q10. ABC and CDE are right angled triangle. $\angle ABC = \angle CDE = 90^\circ$, D lies on AC and E lies on BC. AB = 24 cm, BC = 60 cm. If DE = 10 cm, then CD is :



- (a) 28 cm
- (b) 35 cm
- (c) 25 cm
- (d) can't be determined

Q11. A take thrice as much time as B and twice as much time as C to complete a piece of work. They together complete the work in 1 day. In what time, will A alone complete the work.

- (a) 5 days
- (b) 6 days
- (c) 4 days
- (d) 7 days

Q12. If the length of three sides of a triangle are 12 cm, 16 cm and 20 cm, then find the length of the median to the largest side?

- (a) 12 cm
- (b) 8 cm
- (c) 6 cm
- (d) 10 cm

Q13.

If $\sqrt{5} = 2.236$, then find the value of $\frac{4+\sqrt{5}}{4-\sqrt{5}}$?

- (a) 3.535
- (b) 4.235
- (c) 5.125
- (d) 6.236

Q14. Find the value of $[(5^{-1} - 6^{-1})^{-1} - (2^{-1} - 3^{-1})^{-1}]$

- (a) 24
- (b) 26
- (c) 30
- (d) 40

Q15. Find the value of $\sqrt{7 - 2\sqrt{10}} + \sqrt{5 + 2\sqrt{6}}$

- (a) $\sqrt{5} + \sqrt{2}$
- (b) $\sqrt{3} + \sqrt{5}$
- (c) $\sqrt{3} + \sqrt{2}$
- (d) $\sqrt{5}$



Q16.

$$[4^2 + 5^2 + 6^2 + 7^2 + 8^2 + 9^2 + 10^2 + 11^2 + 12^2]$$

is equal to?

- (a) 636
- (b) 650
- (c) 635
- (d) 646

Q17. If the circumference of the circle is 11 cm and the angle of a sector of the circle is 90° . Find the area of sector? $(\pi = \frac{22}{7})$

- (a) $2\frac{13}{32} \text{ cm}^2$
- (b) $3\frac{13}{32} \text{ cm}^2$
- (c) $1\frac{29}{48} \text{ cm}^2$
- (d) $2\frac{27}{32} \text{ cm}^2$

Q18. The discount series 20%, 30% and 40% is equivalent to single discount of

- (a) 50%
- (b) 56.8%
- (c) 60%
- (d) 66.4%

Q19. A shopkeeper allows 20% discount on his marked price. If the cost price of the article is Rs. 100 and he has to make a profit of 20%, then his Marked price must be.

- (a) 130 rs.
- (b) 120 rs.
- (c) 150 rs.
- (d) 160 rs.

Q20.

If $\frac{a}{3} = \frac{b}{5} = \frac{c}{7}$, then find the value of $\frac{a+b+c}{b}$?

- (a) 3
- (b) 4
- (c) 5
- (d) 7

Q21. A contractor undertook to finish a certain work in 124 days and employed 120 men. After 64 days, he found that he had already done $\frac{2}{3}$ of the work. How many men can be discharged now so that the work may finish in time?

- (a) 48
- (b) 56
- (c) 40
- (d) 50



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Q22. 3 men A, B, C completes the work in 10, 12, 15 days respectively. If A, B & C starts the work , after 2 days A left the work & next after 2 days C also left the work. Then find is how many days the whole work will complete?

- (a) $6\frac{2}{5}$ days
- (b) $7\frac{2}{5}$ days
- (c) $9\frac{2}{5}$ days
- (d) $10\frac{2}{5}$ days

Q23. A & B alone takes 12 days & 3 days more time to complete a work than A & B together. Then find in how many days A alone does the work?

- (a) 18
- (b) 9
- (c) 27
- (d) 36

Q24. A, B & C complete a work in 10, 12 & 15 days respectively. If they start the work together till the whole work gets completed. Find the share of A out of the total wages of Rs. 750?

- (a) Rs. 250
- (b) Rs. 300
- (c) Rs. 380
- (d) Rs. 200

Q25. 2 men can complete a work in 3 days, while 3 women can complete the same work in 4 days & 4 children can complete the same work in 6 days. In how many days 1 men & 2 children can complete the same work?

- (a) 6 days
- (b) 5 days
- (c) 4 days
- (d) 7 days

Q26. A completes $\frac{7}{10}$ of a work in 15 days, then he completes the reaming work with the help of B in 4 days. Find in how much time (A + B) can complete the whole work?

- (a) $\frac{20}{3}$ days
- (b) $\frac{40}{3}$ days
- (c) $\frac{50}{3}$ days
- (d) $\frac{70}{3}$ days

Q27.

If $19 \tan \theta = 27$.

Then find the value of $\frac{1+2 \sin \theta \cos \theta}{1-2 \sin \theta \cos \theta} = ?$

- (a) $\frac{900}{19}$
- (b) $\frac{700}{23}$
- (c) $\frac{529}{16}$
- (d) $\frac{1250}{41}$

Q28.

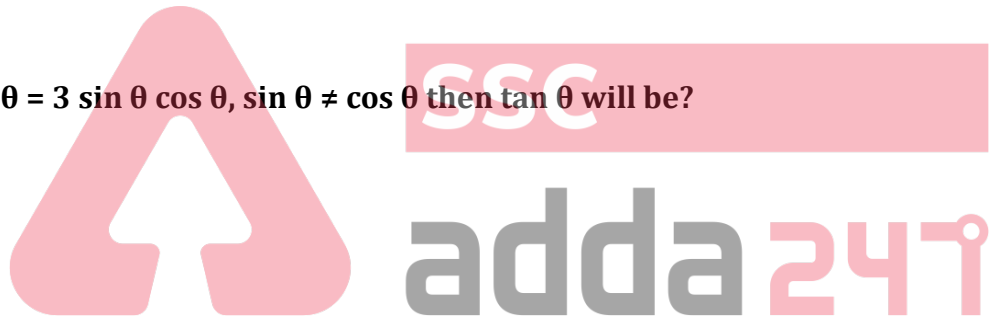
If $0 \leq \alpha \leq \frac{\pi}{2}$ $2 \sin \alpha + 15 \cos^2 \alpha = 17$,

then the value of $\cot \alpha$ will be

- (a) $1/2$
- (b) $5/4$
- (c) $3/4$
- (d) $1/4$

Q29. If $2 - \cos^2 \theta = 3 \sin \theta \cos \theta$, $\sin \theta \neq \cos \theta$ then $\tan \theta$ will be?

- (a) $1/2$
- (b) 0
- (c) $2/3$
- (d) $1/3$



Q30. By selling 32 oranges for Rs 1 a man loss 40%. How many for a rupee did he sell to earn 20% ?

- (a) 15
- (b) 17
- (c) 19
- (d) 16

