

## Quantitative Aptitude Previous Year Question & Answers

1. Let  $C_1$  and  $C_2$  be the inscribed and circumscribed circles of a triangle with sides 3cm, 4cm and 5cm then find the ratio between the areas of  $C_1$  and  $C_2$  is

a)  $9/16$

b)  $9/25$

c)  $4/25$

d)  $16/25$

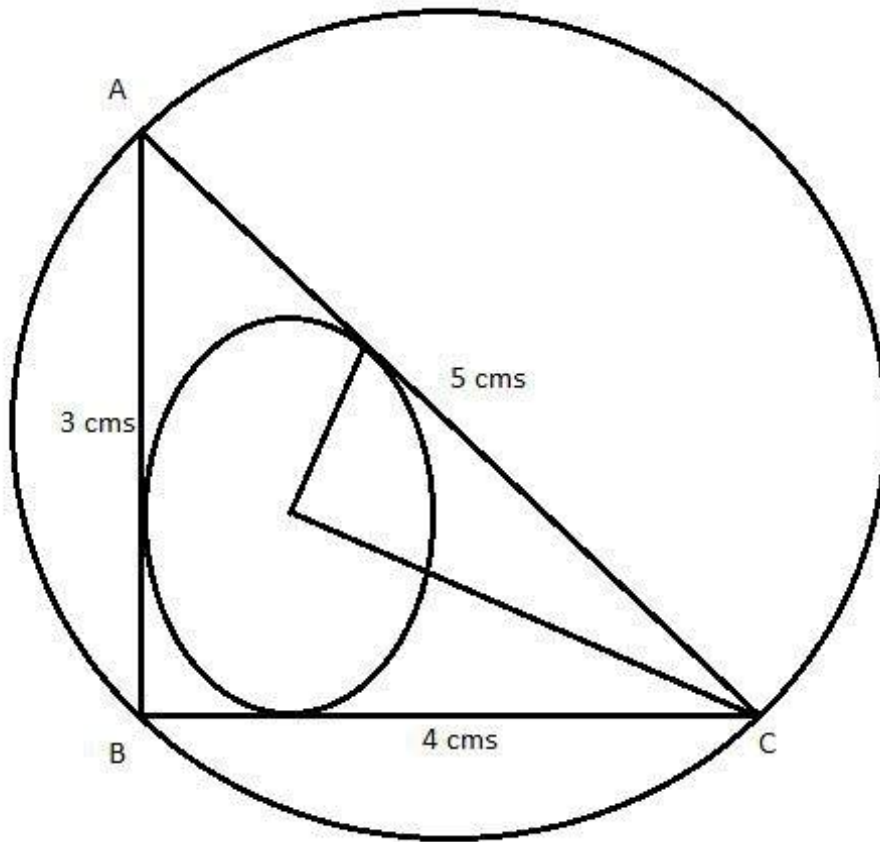
**Ans. c.**

**Explanation:** Since, sides are 3, 4, and 5 cms. Therefore, triangle will be a right-angled triangle.

The radius of the inscribed circle  $C_1 = (3 + 4 - 5)/2 = 1$  cms.

The radius of the circumscribed circle  $C_2 = 5/2 = 2.5$  cms. (because in this case, the hypotenuse will be the diameter of the circumscribed circle.

$$\text{Area } C_1 / \text{Area } C_2 = \pi * (1)^2 / \pi * (2.5)^2 = 100/625 = 4/25;$$



2. If  $x = \frac{1}{\sqrt{2} + 1}$  ; then  $(x + 1)$  equals to ?

a) 2

b)  $\sqrt{2}-1$

c)  $\sqrt{2}+1$

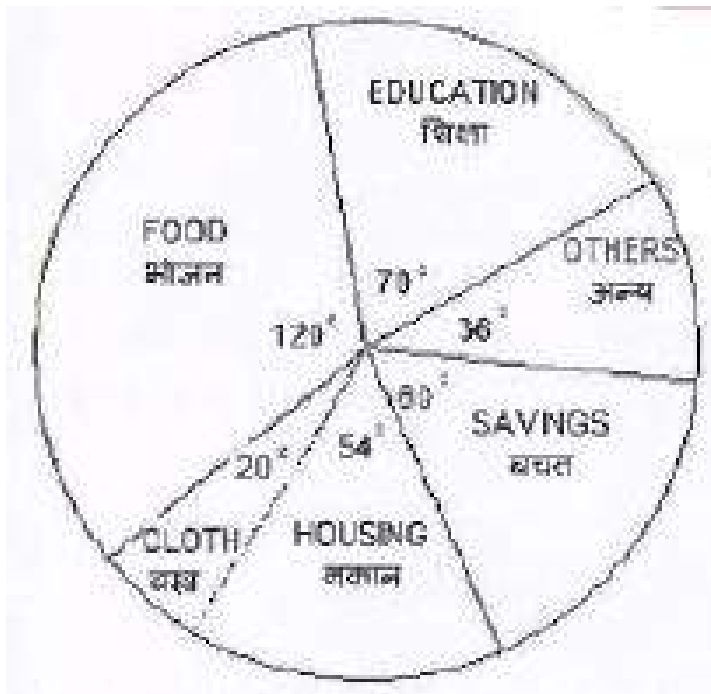
d)  $\sqrt{2}$

Ans. d.

Explanation:

$$x = \frac{1}{\sqrt{2}+1}; \Rightarrow x = \frac{\sqrt{2}-1}{(\sqrt{2}+1)(\sqrt{2}-1)} = \sqrt{2}-1$$
$$x+1 = \sqrt{2}-1+1 = \sqrt{2};$$

Directions/ In Question nos. / 3 to 5, The pie-chart given here shows expenditure incurred by a family on various items and their savings. Study the chart and answer the questions based on the pie-chart.



3. If the monthly income is Rs. 36000 then the yearly savings is:

a) Rs. 72000

b) Rs. 60000

c) Rs. 74000

d) Rs. 70000

**Ans. a.**

**Explanation:** Savings = 60;

Monthly Savings =  $(60/360) \times 36000 = \text{Rs. } 6000$ .

Yearly savings =  $12 \times 6000 = \text{Rs. } 72000$ .

**4. If the expenditure on education is Rs. 1600 more than that of housing then the expenditure on food is:**

a) Rs. 6000

b) Rs. 12000

c) Rs. 7000

d) Rs. 3333

**Ans. b.**

**Explanation:** Expenditure on education = 70

Expenditure on housing = 54

Difference between expenditure on education and housing =  $70 - 54 = 16$ ;

Monthly expenditure on education =  $(16/360) * \text{Monthly income}$ ;

Monthly income =  $(1600 * 360)/16 = \text{Rs. } 36000$

Hence, the expenditure of food =  $(120 * 36000)/360 = 12000$ ;

**5. The ratio of expenditure on food to savings is:**

a) 2 : 1

b) 3 : 1

c) 3 : 2

d) 10 : 9

**Ans. a.**

**Explanation:** The required ratio =  $120/60 = 2: 1$ ;

**6. The average marks obtained by a student in 6 subjects is 88. On subsequent verification it was found that the marks obtained by him in a subject was wrongly copied as 86 instead of 68. The correct average of the marks obtained by him is-**

a) 85

b) 87

c) 84

d) 86

**Ans. a.**

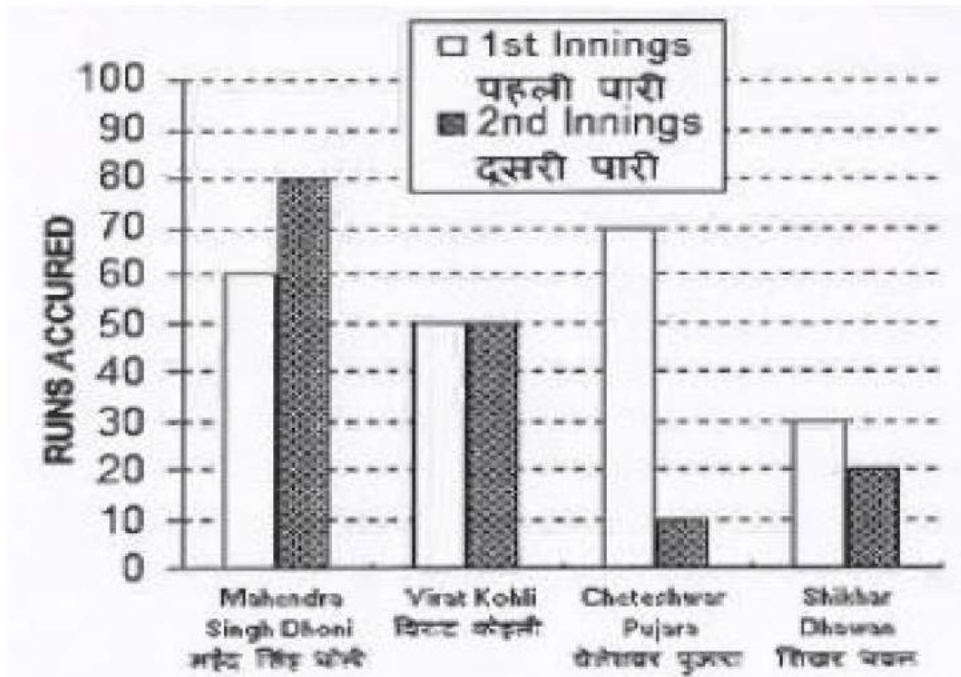
**Explanation:** Suppose, these 6 subjects are  $S_1, S_2, S_3, \dots, S_6$ ;

$$S_1 + S_2 + S_3 + \dots + S_6 = 88 * 6 = 528;$$

$$\text{The actual sum of marks in all subjects} = 528 - 86 + 68 = 510;$$

$$\text{Hence, the correct average marks} = 510/6 = 85;$$

**Directions / In Question nos. / 7 to 10,** Given here a multiple bar diagram of the scores of four players in two innings. Study the diagram and answer the questions.



**7. The average run of two Innings of the player who scored highest in average is:**

- a) 75
- b) 85
- c) 80
- d) 70

**Ans. d.**

**Explanation:** From the figure, it can be seen lucidly that Mahendra Singh Dhoni has scored the maximum runs. Hence,

The average runs scored by MS Dhoni =  $(60 + 80)/2 = 70$ .

**8. The average run in two innings of the player who has scored minimum at the second innings is:**

a) 50

b) 60

c) 40

d) 30

**Ans. c.**

**Explanation:** Cheteshwar Pujara scored the lowest marks in the second innings.

Hence, the average runs scored by him =  $(70 + 10)/2 = 40$ .

**9. The average score in second innings contributed by the four players is:**



a) 30

b) 60

c) 40

d) 50

**Ans. c.**

**Explanation:** Average run scored by all four player in second inning =  $(80 + 50 + 10 + 20)/4 = 40$

**1. The total scores in the first innings contributed by the four players is:**

a) 220

b) 200

c) 210

d) 190

**Ans. c.**

**Explanation:** The total scores in the first innings by all four players =  $(60 + 50 + 70 + 30) = 210$ ;