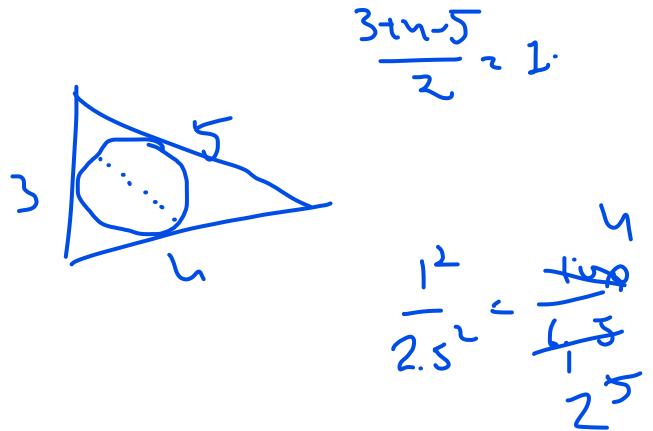# Quantitative Aptitude Previous Year Question & Answers

1. Let C1 and C2 be the inscribed and circumscribed circles of a triangle with sides 3cm, 4cm and 5cm then find the ratio between the areas of C1 and C2 is

a) 9 /16

b) 9 / 25

c) 4 / 25

d) 16 / 25

(handwritten: $\frac{3+4-5}{2} = 1$; diagram of triangle with inscribed circle, sides 3, 5, 4; $\frac{1^2}{2.5^2} = \frac{1}{6.25} = \frac{4}{25}$)

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 C1= (3 + 4 – 5)/2 = 1 cms.

The radius of the circumscribed circle C2= 5/2 = 2.5 cms. (because in this case, the hypotenuse will be the diameter of the circumscribed circle.

Area C1/ Area C2 = pi* $(1)^2$/pi*$(2.5)^2$ = 100/625 = 4/25;

A

5 cms

3 cms

4 cms

B

C
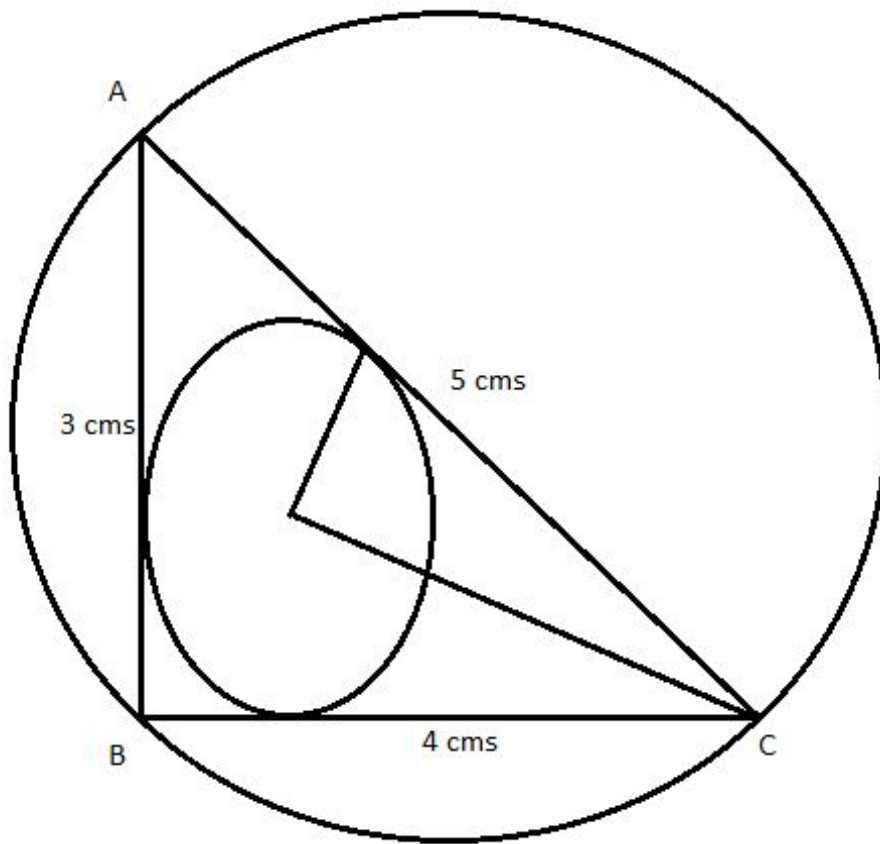
2. If x =1/(√2 +1) ; then (x + 1) equals to ?

a) 2

$$x = \frac{\sqrt{2}-1}{2-1} = \sqrt{2}-1$$
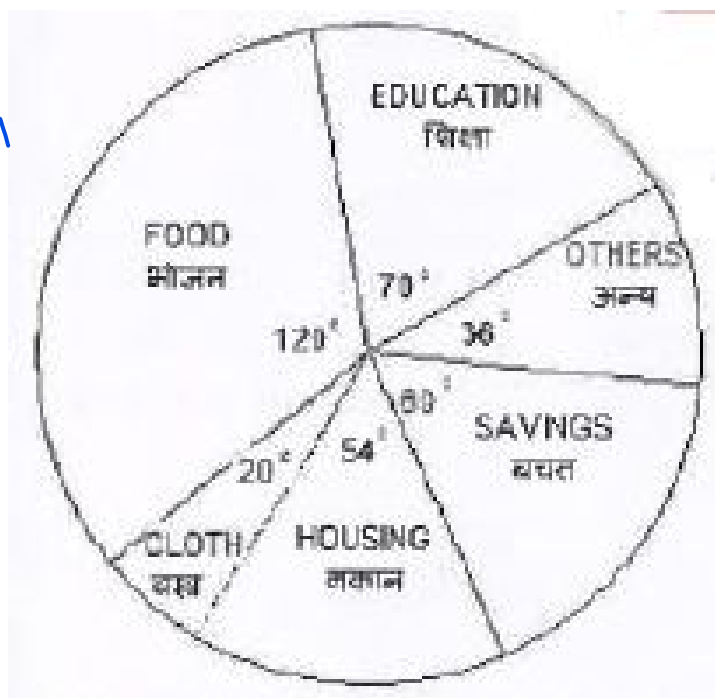
b) √2-1

$$x + 1 = \sqrt{2}$$

c) √2+1

d) √2 ✓

Ans. d.

Explanation:

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

$$x+1 = \sqrt{2}-1+1 = \sqrt{2};$$

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.

$$\frac{70}{360} = \frac{5x}{360} + 1600$$

$$\frac{120}{60} \quad 2:1$$

$$\frac{60}{360} \times 36000 = 6000$$

$$12 \times 6000$$

$$72000 \checkmark$$

$$\frac{120 \times 36000}{360}$$

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

$$12000$$

a) Rs. 72000 ✓

b) Rs. 60000

c) Rs. 74000

d) Rs. 70000

Ans. a.

Explanation: Savings = 60;

Monthly Savings = (60/360)*36000 = Rs. 6000.

Yearly savings = 12*6000 = 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)* Monthly income;

Monthly income = (1600 *360)/16 = 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

$$\frac{120}{60} = 2:1$$

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 S1, S2, S3,….., S6;

S1 + S2 + S3 + ……. + S6 = 88*6 = 528;

The actual sum of marks in all subjects = 528 -86 + 68 = 510;

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.
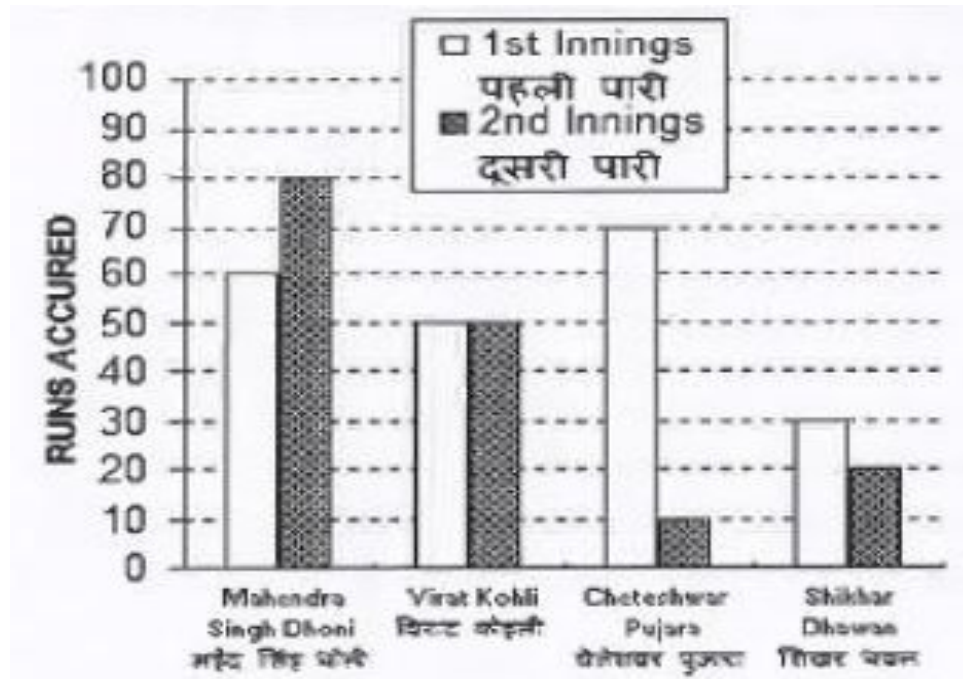
$$\frac{140}{2} = 70$$

$$\frac{160}{4} = 40$$

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;