



## **Data Sufficiency Questions for MAH-CET**

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# Questions

## Instructions

In each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and

Give answer

- (A) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question
- (B) If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question
- (C) If the data either in statement I alone or in statement II alone are sufficient to answer the question
- (D) If the data given in both statements I and II together are not sufficient to answer the question and
- (E) If the data in both statements I and II together are necessary to answer the question.

## Question 1

**What is the present age of the father?**

**I. Present age of the father five times of the present age of his son**

**II. 5 years ago age of the father is 15 times of the age of his son**

- A** If the data in statement I alone are sufficient to answer the question, while the data in statement
- B** If the data in statement II alone are sufficient to answer the question, while the data in statement
- C** If the data either in statement I alone or in statement II alone are sufficient to answer the question
- D** If the data given in both statements I and II together are not sufficient to answer the question and
- E** If the data in both statements I and II together are necessary to answer the question.

**Answer: E**

**Explanation:**

I : Let present age of son =  $x$  years

=> Present age of father =  $5x$  years.

There is no other information, so statement I is not sufficient.

Similarly, II alone is not sufficient.

Combining both statements, we get :

$$\Rightarrow (5x - 5) = 15(x - 5)$$

$$\Rightarrow 5x - 5 = 15x - 75$$

$$\Rightarrow 15x - 5x = 75 - 5$$

$$\Rightarrow 10x = 70 \Rightarrow x = \frac{70}{10} = 7$$

$\therefore$  father's age =  $5 \times 7 = 35$  years.

**Thus, both statements together are sufficient.**

## Question 2

**What is the area of right angle triangle ?**

**I. Height of right-angled triangle is  $\frac{3}{4}$  th of its base**

**II. Length of the diagonal of the right angle triangle is 5 meters**

- A** If the data in statement I alone are sufficient to answer the question, while the data in statement
- B** If the data in statement II alone are sufficient to answer the question, while the data in statement
- C** If the data either in statement I alone or in statement II alone are sufficient to answer the question

- D** If the data given in both statements I and II together are not sufficient to answer the question and
- E** If the data in both statements I and II together are necessary to answer the question.

**Answer: E**

**Explanation:**

I : Let base of the triangle =  $4x$  m

$$\Rightarrow \text{Height of triangle} = \frac{3}{4} \times 4x = 3x \text{ m}$$

There is no other info, so I alone is insufficient.

Similarly, II alone is also insufficient.

Combining both statements, and using pythagoras theorem, we get :

$$\Rightarrow (3x)^2 + (4x)^2 = (5^2)$$

$$\Rightarrow 9x^2 + 16x^2 = 25$$

$$\Rightarrow x^2 = \frac{25}{25} = 1$$

$$\Rightarrow x = \sqrt{1} = 1$$

$$\Rightarrow \text{Base} = 4 \text{ m and height} = 3 \text{ m}$$

$$\therefore \text{Area of triangle} = \frac{1}{2} \times 3 \times 4 = 6m^2$$

**Thus, both statements together are sufficient.**

**Question 3**

**what is the number of plants planted in columns and rows in field?**

**Number of columns is 4 more than rows**

**In each column ,number of trees are even**

- A** If the data in statement I alone are sufficient to answer the question, while the data in statement
- B** If the data in statement II alone are sufficient to answer the question, while the data in statement
- C** f the data either in statement I alone or in statement II alone are sufficient to answer the question
- D** If the data given in both statements I and II together are not sufficient to answer the question and
- E** f the data in both statements I and II together are necessary to answer the question.

**Answer: D**

**Explanation:**

To find the number of plants planted, we need to find the number of columns and rows and then multiply them.

Let number of columns =  $c$  and number of rows =  $r$

(I) : Number of columns is 4 more than rows

$$\Rightarrow c - r = 4$$

But, we do not know the exact value. So, statement I alone is not sufficient.

(II) : In each column ,number of trees are even,  $\Rightarrow$  number of rows are even in number

Again, we do not know the exact value. So, statement II alone is not sufficient.

Combining above statements, we still do not know the exact number of columns and rows. So, statement I and II together are not sufficient.

$\Rightarrow$  Ans - (D)

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#### Question 4

What is the rate of interest?

I. simple interest obtained on the sum of 25000 in 2 years is 250 less than the interest obtained from compound interest during same time

II. simple interest obtained in 10 years is equal to the original sum

- A If the data in statement I alone are sufficient to answer the question, while the data in statement
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- C If the data either in statement I alone or in statement II alone are sufficient to answer the question
- D If the data given in both statements I and II together are not sufficient to answer the question and
- E If the data in both statements I and II together are necessary to answer the question.

**Answer: C**

**Explanation:**

Let rate of interest =  $R\%$

I :  $P = \text{Rs. } 25,000$  and time period = 2 years

$$\Rightarrow S.I. = \frac{P \times R \times T}{100}$$

$$= \frac{25000 \times R \times 2}{100} = 500R$$

Interest obtained from compound interest =  $P[(1 + \frac{R}{100})^T - 1]$

$$\Rightarrow (500R + 250) = 25000[(1 + \frac{R}{100})^2 - 1]$$

$$\Rightarrow 250(2R + 1) = 25000[(1 + \frac{R}{100})^2 - 1]$$

$$\Rightarrow 2R + 1 = 100(1 + \frac{R^2}{100^2} + \frac{2R}{100} - 1)$$

$$\Rightarrow 2R + 1 = \frac{R^2}{100} + 2R$$

$$\Rightarrow R^2 = 100 \times 1 = 100$$

$$\Rightarrow R = \sqrt{100} = 10\%$$

Thus, statement I alone is sufficient.

II : Let original sum = simple interest =  $\text{Rs. } P$  and time period = 10 years

$$\Rightarrow S.I. = \frac{P \times R \times T}{100}$$

$$\Rightarrow P = \frac{P \times R \times 10}{100}$$

$$\Rightarrow R = \frac{100}{10} = 10\%$$

Thus, statement II alone is also sufficient.

**Thus, either statement alone is sufficient.**

#### Question 5

What is the area of the circle ?

I. perimeter of the circle is 88 cms

II. diameter of the circle is 28 cms

- A If the data in statement I alone are sufficient to answer the question, while the data in statement
- B If the data in statement II alone are sufficient to answer the question, while the data in statement

- C** If the data either in statement I alone or in statement II alone are sufficient to answer the question
- D** If the data given in both statements I and II together are not sufficient to answer the question and
- E** If the data in both statements I and II together are necessary to answer the question.

**Answer: C**

**Explanation:**

Let radius of the circle =  $r$  cm

I : Perimeter =  $2\pi r = 88$

$$\Rightarrow 2 \times \frac{22}{7} \times r = 88$$

$$\Rightarrow r = 88 \times \frac{7}{44} = 14 \text{ cm}$$

$$\therefore \text{Area} = \pi r^2 = \frac{22}{7} \times (14)^2$$

$$= 22 \times 2 \times 14 = 616 \text{ cm}^2$$

Thus, statement I alone is sufficient.

II : Diameter = 28 cm

$$\Rightarrow \text{Radius}, r = \frac{28}{2} = 14 \text{ cm}$$

$$\therefore \text{Area} = \pi r^2 = \frac{22}{7} \times (14)^2$$

$$= 22 \times 2 \times 14 = 616 \text{ cm}^2$$

Thus, statement II alone is sufficient.

**Thus, either statement alone is sufficient.**

#### Question 6

**What is the area of the circle ?**

**I. perimeter of the circle is 88 cms**

**II. diameter of the circle is 28 cms**

- A** If the data in statement I alone are sufficient to answer the question, while the data in statement
- B** If the data in statement II alone are sufficient to answer the question, while the data in statement
- C** If the data either in statement I alone or in statement II alone are sufficient to answer the question
- D** If the data given in both statements I and II together are not sufficient to answer the question and
- E** If the data in both statements I and II together are necessary to answer the question.

**Answer: C**

**Explanation:**

Let radius of the circle =  $r$  cm

I : Perimeter =  $2\pi r = 88$

$$\Rightarrow 2 \times \frac{22}{7} \times r = 88$$

$$\Rightarrow r = 88 \times \frac{7}{44} = 14 \text{ cm}$$

$$\therefore \text{Area} = \pi r^2 = \frac{22}{7} \times (14)^2$$

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Thus, statement I alone is sufficient.

II : Diameter = 28 cm

$$\Rightarrow \text{Radius, } r = \frac{28}{2} = 14 \text{ cm}$$

$$\therefore \text{Area} = \pi r^2 = \frac{22}{7} \times (14)^2$$

$$= 22 \times 2 \times 14 = 616 \text{ cm}^2$$

Thus, statement II alone is sufficient.

**Thus, either statement alone is sufficient.**

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### Question 7

Six friends, E, F, G, H, I and J are sitting around a circular table facing towards the center, but not necessarily in the same order. Find the position of G with respect to F.

**I. E is sitting second to the right of G. Only one person is sitting between E and I. F is an immediate neighbor of G.**

**II. There are two persons between G and H. H is an immediate neighbor of both I and E. F is not an immediate neighbor of I.**

- A** if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B** if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
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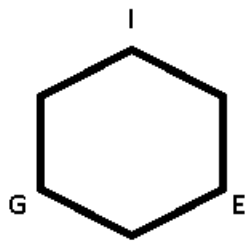
**Answer: E**

### Explanation:

I : E is sitting second to the right of G and only one person is sitting between E and I

$\Rightarrow$  I is sitting second to the right of E.

There is no information about position of H and J.

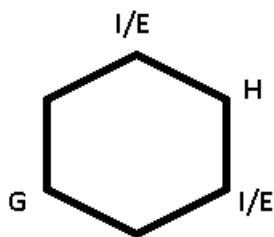


Thus, I alone is not sufficient.

II : There are two persons between G and H

=> G and H are sitting opposite each other.

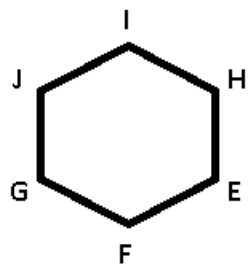
H is an immediate neighbor of both I and E. There is no information about position of F and J.



Thus, II alone is not sufficient.

Combining I & II : F is not an immediate neighbor of I.

=> F will sit between G and E.



=> G is sitting to the immediate left of F.

Thus, I & II together are sufficient.

#### Question 8

How many persons are there in a straight line who are facing North ?

I. L is standing exactly in the middle. L is an immediate neighbor of both A and O. Two persons are standing between A and T. T is standing at the second position from the left end of the line. B is standing at the extreme left end of the line.

II. J is standing at the second position from the right end of the line. Five persons are standing between J and F. There are two persons between F and K. K is at one of the extreme ends of the line.

- A if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- C if the data either in Statement I alone or in Statement II alone are sufficient to answer the question.
- D if the data even in both Statements I and II together are not sufficient to answer the question.

**E** if the data in both Statements I and II together are necessary to answer the question.

**Answer: B**

**Explanation:**

I : B is standing at the left end and T is standing at the second position from the left end of the line

=> T is to the immediate right of B.

Also, 2 persons are standing between A and T, => A is standing at the 5th position from left end.

A is also immediate neighbor of L, who sits in the middle.

=> L is at either 4th position from left end, which means total number of members in the line = 7

Or, L is at 6th position from left end, which means total number of members in the line = 11

Thus, I alone is not sufficient.

II : J is standing at the second position from the right end of the line and five persons are standing between J and F

=> F is standing at 8th position from the right end.

There are two persons between F and K and K is at one of the extreme ends of the line.

=> K is at left end, and F is at 4th position from the left end of the line.

=> Total members in the line =  $8 + 4 - 1 = 11$

**Thus, II alone is sufficient.**

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Give answer c: if the data either in Statement I alone or in Statement II alone are sufficient to answer the question.

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Give answer e: if data in both the Statements I and II together are necessary to answer the question.

**Question 9**

**Who is sitting to the immediate right of Tanvi among five friends sitting around a circle facing the centre?**

**I. Ansh is sitting exactly between Bindu and Suresh and Neel is sitting to the immediate right of Suresh.**

**II. Tanvi is sitting exactly between Bindu and Neel and Ansh is sitting to the immediate right of Bindu.**

**A** if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.

**B** if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.

**C** if the data either in Statement I alone or in Statement II alone are sufficient to answer the question.

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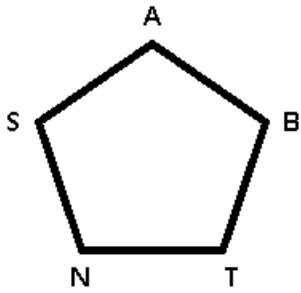
**Answer: C**

**Explanation:**

I : Ansh is sitting between Bindu and Suresh and Neel is sitting to the immediate right of Suresh.

=> Ansh is sitting to the immediate left of Suresh and Bindu is sitting to the immediate left of Ansh.

The only position left is filled by Tanvi.



=> Bindu is sitting to the immediate right of Tanvi.

Thus, statement I alone is sufficient.

II : Tanvi is sitting exactly between Bindu and Neel and Ansh is sitting to the immediate right of Bindu.

=> Tanvi is sitting to the immediate left of Bindu and Neel is sitting to the immediate left of Tanvi.

=> Bindu is sitting to the immediate right of Tanvi.

Thus, statement II alone is sufficient.

∴ **Either statement alone is sufficient.**

#### Question 10

**Who earns the highest among the five friends?**

**I. Priya earns more than Pinky and Sheetal and less than only Shilpa.**

**II. Sheetal earns more than Neetu but less than Pinky.**

- A** if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B** if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- C** if the data either in Statement I alone or in Statement II alone are sufficient to answer the question.
- D** if the data in both the Statements I and II are not sufficient to answer the question.
- E** if data in both the Statements I and II together are necessary to answer the question.

**Answer: A**

#### Explanation:

Statement I : Priya earns more than Pinky and Sheetal.

Priya earns less than only Shilpa, => Priya earns more than everyone but Shilpa.

=> Shilpa is the highest earner.

**Thus, statement I alone is sufficient.**

II : Sheetal earns more than Neetu but less than Pinky.

We do not have any information about other persons, so we cannot determine who earns the highest.

Thus, statement II alone is not sufficient.

#### Question 11

**How is Vandana related to Prabha ?**

**I. Mallika's sister Vandana is Rajesh's wife. Prabha is Rajesh's good friend.**

**II. Prabha is Rajesh's brother's wife and Vandana is Rajesh's wife.**

- A** if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B** if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- C** if the data either in Statement I alone or in Statement II alone are sufficient to answer the question.
- D** if the data in both the Statements I and II are not sufficient to answer the question.
- E** if data in both the Statements I and II together are necessary to answer the question.

**Answer: B**

**Explanation:**

I : Vandana is the wife of Rajesh.

Prabha is the friend of Rajesh.

So, there is no such defined relation between Vandana and Prabha.

Thus, I alone is not sufficient.

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II : Vandana is the wife of Rajesh.

Prabha is the wife of Rajesh's brother.

=> Vandana and Prabha are sisters-in-law.

**Thus, statement II alone is sufficient.**

**Question 12**

**Which train did Harish catch to go to office?**

**I. Harish missed his usual train of 10.25 a.m. A train comes in every 5 minutes.**

**II. Harish did not catch the 10.40 a.m. train or any train after that time.**

- A** if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B** if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- C** if the data either in Statement I alone or in Statement II alone are sufficient to answer the question.
- D** if the data in both the Statements I and II are not sufficient to answer the question.
- E** if data in both the Statements I and II together are necessary to answer the question.

**Answer: D**

**Explanation:**

I : Harish missed his usual train at 10.25 a.m. and in every 5 minutes, a train comes.

Harish could have caught any train at 10.30 a.m. , 10.35 a.m. , 10.40 a.m. and so on.

There is no information about that, so it is not possible to determine which train Harish caught.

Thus, I alone is insufficient.

Even in statement II or even after combining both the statements, the same problem arises.

Thus, data in both statements even together is not sufficient to answer the question.

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### Question 13

What is the code for 'is' in the code language ?

I. In the code language 'shi to ke' means 'pen is blue'.

II. In the same code language 'ke si re' means 'this is wonderful'.

- A if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- C if the data either in Statement I alone or in Statement II alone are sufficient to answer the question.
- D if the data in both the Statements I and II are not sufficient to answer the question.
- E if data in both the Statements I and II together are necessary to answer the question.

**Answer: E**

**Explanation:**

Since, the common word in both statements is - 'is'

So, clearly we need to combine both the statements to find the code for 'is'

After combining both statements, code for 'is' = ke

Thus, both statements are required to answer the question.

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Give answer a: if the **data in statement I alone** is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question

Give answer b: if the **data in statement II** alone is sufficient to answer the question, while the **data in statement I** alone is **not sufficient** to answer the question

Give answer c: if the data either in **statement I alone** or in **statement II** alone is **sufficient** to answer the question.

Give answer d: if the data in both the statements I and II together are not sufficient to answer the question.

Give answer e: if the data in both the statements I and II together are necessary to answer the question.

### Question 14

How much time will Ravindra take to complete one round, cycling around the boundary of a circular ground ?

I. Speed of cycling is 12 kmph

II. Diameter of the ground is 700 metres

- A if the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question
- B if the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question
- C if the data either in statement I alone or in statement II alone is sufficient to answer the question.
- D if the data in both the statements I and II together are not sufficient to answer the question.
- E if the data in both the statements I and II together are necessary to answer the question.

**Answer: E**

**Explanation:**

I : Speed = 12 kmph

$$= 12 \times \frac{5}{18} = \frac{10}{3} \text{ m/s}$$

II : Circumference of ground =  $\frac{22}{7} \times 700 = 2200 \text{ m}$

When both statements are combined, the required time will be

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}}$$

$$= \frac{2200 \times 3}{10} = 660 \text{ s}$$

#### Question 15

What is the two digit number ?

I. Difference between the digits is 7.

II. Sum of the digits is 11.

- A** if the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question
- B** if the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question
- C** if the data either in statement I alone or in statement II alone is sufficient to answer the question.
- D** if the data in both the statements I and II together are not sufficient to answer the question.
- E** if the data in both the statements I and II together are necessary to answer the question.

**Answer: D**

**Explanation:**

Let the number be  $10x + y$

I :  $x - y = 7$  or  $y - x = 7$

II :  $x + y = 11$

I & II : Solving  $x - y = 7$  and  $x + y = 11$

$$\Rightarrow x = 9, y = 2$$

Solving  $y - x = 7$  and  $x + y = 11$

$$\Rightarrow x = 2, y = 9$$

Hence, the possible numbers are 92 and 29. Since, unique answer is not determined

Ans - (D)

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#### Question 16

How many children are there in the class ?

I. Boys and girls are in the ratio of 8 : 5 respectively and number of girls is less than that of boys by 24.

II. Number of girls in the class is 40

- A** if the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question
- B** if the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question
- C** if the data either in statement I alone or in statement II alone is sufficient to answer the question.
- D** if the data in both the statements I and II together are not sufficient to answer the question.
- E** if the data in both the statements I and II together are necessary to answer the question.

**Answer: A**

**Explanation:**

I : Let the number of boys and girls be  $8x$  and  $5x$  resp

$$\Rightarrow 8x - 5x = 24$$

$$\Rightarrow x = \frac{24}{3} = 8$$

Hence, total number of children in the class =  $13x = 13 \times 8 = 104$

**Statement I alone is sufficient**

Statement II does not give any relation between the number of boys and girls. Thus, it is not sufficient.

**Question 17**

**What is the rate of interest p.c .p. a.?**

**I. Simple interest earned in 3 years is Rs. X.**

**II. The amount increases by 80% in 5 years.**

- A** if the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question
- B** if the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question
- C** if the data either in statement I alone or in statement II alone is sufficient to answer the question.
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- E** if the data in both the statements I and II together are necessary to answer the question.

**Answer: B**

**Explanation:**

I : Since, we do not know the principal amount, thus I alone is not sufficient to find the rate of interest.

II : Let principal be  $100x$

$$\Rightarrow \text{Amount after 5 years} = \frac{180}{100} \times 100x = 180x$$

$$\Rightarrow \text{interest after 5 years} = 180x - 100x = 80x$$

$$\therefore r = \frac{S.I. \times 100}{P \times T}$$

$$\Rightarrow r = \frac{80x \times 100}{100x \times 5}$$

$$\Rightarrow r = 16\%$$

**Thus, II alone is sufficient.**

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**Question 18**

**What is the population of the city A?**

**I. The ratio of the population of males and females in city A is 27 : 23 and the difference between their population is 100000.**

**II. The population of city A is 80% of that of city B. The difference of population of city A and city B is 312500.**

- A** if the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.

- B** if the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
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- D** if the data in both the statements I and II is not sufficient to answer the question.
- E** if the data in both the statements I and II together is necessary to answer the question.

**Answer: C**

**Explanation:**

Statement I : Let males in city A =  $27x$  and females in city A =  $23x$

$$\Rightarrow 27x - 23x = 1,00,000$$

$$\Rightarrow x = \frac{1,00,000}{4} = 25,000$$

$$\therefore \text{Total population of city A} = 27x + 23x = 50x$$

$$= 50 \times 25,000 = 12,50,000$$

$\Rightarrow$  Statement I alone is sufficient.

Statement II : Let population of city B =  $100x$

$$\Rightarrow \text{Population of city A} = \frac{80}{100} \times 100x = 80x$$

$$\Rightarrow 100x - 80x = 3,12,500$$

$$\Rightarrow x = \frac{3,12,500}{20} = 15,625$$

$$\therefore \text{Population of city A} = 80 \times 15,625 = 12,50,000$$

$\Rightarrow$  Statement II alone is sufficient.

$\therefore$  Either statement alone is sufficient.

## CMAT Free Solved Previous Papers.

### Question 19

**How many marks did Subodh obtain in Physics ?**

**I. The average marks of Subodh in History, Geography and Chemistry are 75.**

**II. His average marks in History, Geography and Physics are 78.**

- A** if the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
- B** if the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
- C** if the data in statement I alone or in statement II alone is sufficient to answer the question.
- D** if the data in both the statements I and II is not sufficient to answer the question.
- E** if the data in both the statements I and II together is necessary to answer the question.

**Answer: D**

**Explanation:**

Statement I : Sum of marks in History, Geography and Chemistry

$$= 3 \times 75 = 225$$

We cannot find physics marks from statement I alone

Statement II : Sum of marks in History, Geography and Physics

$$= 3 \times 78 = 234$$

Again, from this statement alone, we cannot find physics marks.

Combining above statements, if we subtract equation(1) from (2), we get :

$$\Rightarrow \text{Physics} - \text{chemistry} = 234 - 225 = 9$$

Again, we cannot find Physics marks even after combining both statements.

#### Question 20

**What will be the total cost of fencing a rectangular plot ?**

**I. The area of plot is 1134 sq. metre. The length of plot is 15 metre more than its breadth.**

**II. The cost of fencing is Rs. 180 per metre.**

- A** if the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
- B** if the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question. Give answer
- C** if the data in statement I alone or in statement II alone is sufficient to answer the question.
- D** if the data in both the statements I and II is not sufficient to answer the question.
- E** if the data in both the statements I and II together is necessary to answer the question.

**Answer: E**

#### Explanation:

We need both dimensions and cost of fencing to answer the question. Thus, we require both statements.

Let breadth of the plot =  $x$  m

$$\Rightarrow \text{Length} = (x + 15) \text{ m}$$

$$\Rightarrow \text{Area of plot} = x(x + 15) = 1134$$

$$\Rightarrow x^2 + 15x - 1134 = 0$$

$$\Rightarrow x^2 + 42x - 27x - 1134 = 0$$

$$\Rightarrow x(x + 42) - 27(x + 42) = 0$$

$$\Rightarrow (x + 42)(x - 27) = 0$$

$$\Rightarrow x = 27, -42$$

As length of the plot cannot be negative  $\Rightarrow$  Breadth =  $x = 27$  m

$$\Rightarrow \text{Length} = 27 + 15 = 42 \text{ m}$$

$$\text{Perimeter} = 2(42 + 27) = 2 \times 69$$

$$= 138 \text{ m}$$

$$\therefore \text{Cost of fencing} = 138 \times 180$$

$$= \text{Rs. } 24,840$$

Thus, Both statements together are required to answer the question.

#### Question 21

**What is the cost price of article ?**

**I. A man earns a profit of 20% on selling the article.**

**II. The selling price of article is Rs. 5016.**

- A** if the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
- B** if the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
- C** if the data in statement I alone or in statement II alone is sufficient to answer the question.
- D** if the data in both the statements I and II is not sufficient to answer the question.
- E** if the data in both the statements I and II together is necessary to answer the question.

**Answer: E**

**Explanation:**

Clearly, both statements are required.

Let cost price = Rs.  $100x$

Selling price after profit of 20% =  $\frac{120}{100} \times 100x$

= Rs.  $120x$

From statement II : Selling price = Rs. 5,016

$\Rightarrow 120x = 5016$

$\Rightarrow x = \frac{5016}{120} = 41.8$

$\therefore$  Cost price =  $100 \times 41.8$

= Rs. 4,180

Thus, both statements together are required to answer the question.

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### Question 22

What is the annual salary of Mr. X.

I. The ratio of monthly salaries of X and Y is 9 : 7.

II. The monthly salary of X is more than that of Y by Rs. 16000.

- if the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
- A** if the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
- B** if the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
- C** if the data in statement I alone or in statement II alone is sufficient to answer the question.
- D** if the data in both the statements I and II is not sufficient to answer the question.
- E** if the data in both the statements I and II together is necessary to answer the question.

**Answer: E**

**Explanation:**

Statement I : Let monthly salary of X = Rs.  $9x$  and Y = Rs.  $7x$

Statement II :  $X - Y = 16,000$

Combining above statements, we get :

$\Rightarrow 9x - 7x = 16,000$

$$\Rightarrow x = \frac{16,000}{2} = 8,000$$

$$\therefore X's \text{ annual salary} = 12 \times 9x = 108x$$

$$= 108 \times 8,000 = \text{Rs. } 8,64,000$$

Thus, both statements together are required to answer the question.

### Instructions

Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and

Give answer a: if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.

Give answer b: if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.

Give answer c: if the data in Statement I alone or in Statement II alone are sufficient to answer the question.

Give answer d: if the data in both the Statements I and II are not sufficient to answer the question.

Give answer e: if the data in both the Statements I and II together are necessary to answer the question.

### Question 23

What is the value of  $144 \$ 16 * 7 \# 9$  ?

I. '\$' means ' $\div$ ', '\*' means ' $\times$ ' and '#' means '+'.  
II.  $16 \$ 4 * 2 \# 2 = 10$ .

- A** if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B** if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- C** if the data in Statement I alone or in Statement II alone are sufficient to answer the question.
- D** if the data in both the Statements I and II are not sufficient to answer the question.
- E** if the data in both the Statements I and II together are necessary to answer the question.

**Answer: C**

### Explanation:

I: We know that '\$' means ' $\div$ ', '\*' means ' $\times$ ' and '#' means '+'

$$\Rightarrow 144 \$ 16 * 7 \# 9 = 144 \div 16 \times 7 + 9$$

$$= 63 + 9 = 72$$

Thus, statement I alone is sufficient.

$$\text{II: } 16 \$ 4 * 2 \# 2 = 10$$

$$\Rightarrow 16 \div 4 \times 2 + 2 = 10$$

$\Rightarrow$  '\$' means ' $\div$ ', '\*' means ' $\times$ ' and '#' means '+'

$$\Rightarrow 144 \$ 16 * 7 \# 9 = 144 \div 16 \times 7 + 9$$

$$= 63 + 9 = 72$$

Thus, II alone is sufficient.

$\therefore$  **Either statement alone is sufficient.**

### Question 24

How many children are there in the row of children facing North ?

I. Vasudha who is fifth from the left end is eighth to the left of Anish who is twelfth from the right end.

II. Rahul is fifth to the left of Neeta who is seventh from the right end and eighteenth from the left end.

- A** if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B** if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- C** if the data in Statement I alone or in Statement II alone are sufficient to answer the question.
- D** if the data in both the Statements I and II are not sufficient to answer the question.
- E** if the data in both the Statements I and II together are necessary to answer the question.

**Answer: C**

**Explanation:**

I : Vasudha is 5th from left end.

Anish is 8th to the right of Vasudha  $\Rightarrow$  Anish is  $(8 + 5) = 13$ th from left end

Also, Anish is 12th from right end

$\Rightarrow$  Number of students  $= 13 + 12 - 1 = 24$

Thus, statement I alone is sufficient.

II : Neeta is 7th from right end and 18th from left end.

$\Rightarrow$  Number of students  $= 18 + 7 - 1 = 24$

Thus, II alone is sufficient.

$\therefore$  Either statement alone is sufficient.

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### Question 25

**Who is tallest among the five boys Samar, Ramesh, Rakesh, Karan and Vishwas ?**

**I. Rakesh is taller than Karan and Ramesh, but not as tall as Samar.**

**II. Samar is not the tallest.**

- A** if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B** if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- C** if the data in Statement I alone or in Statement II alone are sufficient to answer the question.
- D** if the data in both the Statements I and II are not sufficient to answer the question.
- E** if the data in both the Statements I and II together are necessary to answer the question.

**Answer: E**

**Explanation:**

I : Rakesh > Karan , Ramesh

Also, Samar > Rakesh

$\Rightarrow$  Samar > Rakesh > Karan , Ramesh

We do not know the position of Vishwas. Thus, I alone is insufficient.

Clearly, II alone is also insufficient.

I & II : Samar is not the tallest.

=> Vishwas is taller than Samar.

=> Vishwas > Samar > Rakesh > Karan , Ramesh

=> Vishwas is the tallest.

**Thus, I & II together are sufficient.**

#### Question 26

**What is the colour of the fresh grass ?**

**I. Blue is called green, red is called orange, orange is called yellow.**

**II. Yellow is called white, white is called black, green is called brown and brown is called purple.**

- A** if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B** if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- C** if the data in Statement I alone or in Statement II alone are sufficient to answer the question.
- D** if the data in both the Statements I and II are not sufficient to answer the question.
- E** if the data in both the Statements I and II together are necessary to answer the question.

**Answer: B**

**Explanation:**

We know that the color of fresh grass is green

Statement I : There is no information about what green color is called, so we can't determine the color of fresh grass.

Thus, statement I alone is not sufficient.

From statement II, green is called brown, which means color of fresh grass is brown

Thus, statement II alone is sufficient.

#### Question 27

**Kumud is facing which direction ?**

**I. Nikhil is facing North and if he turns to his left he faces opposite direction as that of Kumud.**

**II. Saroj who is facing East is to the right of Kumud.**

- A** if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B** if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- C** if the data in Statement I alone or in Statement II alone are sufficient to answer the question.
- D** if the data in both the Statements I and II are not sufficient to answer the question.
- E** if the data in both the Statements I and II together are necessary to answer the question.

**Answer: A**

**Explanation:**

I : Nikhil is facing North.

Nikhil after turning to his left will face west.

=> Kumud is facing east (opposite of west).

Thus, I alone is sufficient.

II : It is not possible to determine the direction in which Kumud is facing.

Thus, II alone is not sufficient.

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### Question 28

How is Nisha related to Nidhi ?

I. Nisha's mother is sister of Nidhi's father.

II. Nidhi is the daughter of Nisha's grand-father's only son.

- A** if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B** if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- C** if the data in Statement I alone or in Statement II alone are sufficient to answer the question.
- D** if the data in both the Statements I and II are not sufficient to answer the question.
- E** if the data in both the Statements I and II together are necessary to answer the question.

**Answer: A**

**Explanation:**

I : Nisha's mother is sister of Nidhi's father.

=> Nisha is cousin of Nidhi.

Thus, I alone is sufficient.

II : Nidhi is the daughter of Nisha's grand-father's only son.

=> Nisha is cousin or brother/sister of Nidhi, as Nisha's grand father can have a daughter.

Thus, II alone is insufficient.

### Question 29

What is the code for 'Comfort' in the code language ?

I. 'pa ke W.' means 'sit with comfort'.

II. 'ke da ra ja' means 'she sat with confidence'.

- A** if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B** if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- C** if the data in Statement I alone or in Statement II alone are sufficient to answer the question.
- D** if the data in both the Statements I and II are not sufficient to answer the question.
- E** if the data in both the Statements I and II together are necessary to answer the question.

**Answer: D**

**Explanation:**

Clearly, the only common word in both statements is with

=> Code of with = 'ke'

∴ We cannot find the code for comfort.

Thus, even I & II together are not sufficient.

**Question 30**

**What is Sunita's rank from the top in the class of 40 students ?**

**I. Rani is 4 ranks below Sunita and is thirty first from the bottom.**

**II. Amit is two ranks above Sunita and is thirty seventh from the bottom.**

- A** if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.
- B** if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.
- C** if the data in Statement I alone or in Statement II alone are sufficient to answer the question.
- D** if the data in both the Statements I and II are not sufficient to answer the question.
- E** if the data in both the Statements I and II together are necessary to answer the question.

**Answer: C**

**Explanation:**

Total number of students = 40

I : Rank of Rani from bottom = 31

=> Rank of Rani from top =  $40 - 31 + 1 = 10$

=> Rank of Sunita from top =  $10 - 4 = 6\text{th}$

Thus, I alone is sufficient.

---

II : Rank of Amit from bottom = 37

=> Rank of Amit from top =  $40 - 37 + 1 = 4\text{th}$

=> Rank of Sunita from top =  $4 + 2 = 6\text{th}$

Thus, II alone is sufficient.

∴ **Either statement alone is sufficient.**

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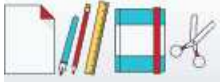
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