



# APTITUDE ONE SHOT

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PRIME CODING

# NUMERICAL ABILITY

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## Question 1

A man needs to cover 60 km in 3 hours. During the first 1.5 hours, he manages to travel 30 km, but then has to halt for 15 minutes to refuel. What should be his speed in the remaining time, compared to his first-hour speed, to reach his destination on time?

### OPTIONS

- 1.2 times
- 1.75 times
- 2.5 times
- 1.6 times

# EXPLANATION

- In the first 1.5 hours, he covers 30 km and then loses 15 minutes.
- Time left = 1.5 hours - 0.25 hours = 1.25 hours
- Distance left = 60 km - 30 km = 30 km
- Required speed =  $30 \div 1.25 = 24$  km/h
- Initial speed =  $30 \text{ km} / 1.5 \text{ hours} = 20$  km/h
- Increase factor =  $24 / 20 = 1.2$

## Question 2

If  $(x + 10)\%$  of 240 is 60% more than  $x\%$  of 180, then by what percentage is 15% of  $(x + 20)$  less than 25% of  $x$ ?

### OPTIONS

- 16%
- 15%
- 15.5%
- 19.047%

# EXPLANATION

1. **Step 1:** Forming the first equation:

$$\frac{(x + 10)}{100} \times 240 = \frac{x}{100} \times 180 + 0.6 \times \left( \frac{x}{100} \times 180 \right)$$

Simplifying,

$$2.4(x + 10) = 1.8x + 1.08x$$

$$2.4x + 24 = 2.88x$$

$$24 = 0.48x$$

$$x = 50$$

2. **Step 2:** Finding the percentage difference:

- 15% of  $(x + 20) = 0.15 \times 70 = 10.5$
- 25% of  $x = 0.25 \times 50 = 12.5$
- % difference =  $\frac{12.5 - 10.5}{10.5} \times 100 = 19$

### Question 3

A fruit seller buys 32 kg of grapes for ₹960. After drying, he converts them into raisins and sells them at ₹65 per kg. If 1 kg grapes yield 800 g raisins, find his profit/loss percentage.

#### OPTIONS

- 73.33% profit
- 73.33% loss
- 26.67% profit
- 26.67% los

# Explanation:

- Cost per kg of grapes = ₹960 / 32 = ₹30 per kg
- Total weight of raisins produced =  $32 \times 0.8 = 25.6$  kg
- Total selling price =  $25.6 \times 65 = ₹1664$
- Profit =  $1664 - 960 = ₹704$
- Profit % =  $\frac{704}{960} \times 100 = 73.33$



## Question 4

Three taps P, Q, and R can fill a tank in 8 hours, 12 hours, and 24 hours, respectively. All three taps are opened together, but P and Q are turned off 4 hours and 3 hour before the tank is completely filled. What is the total time required to fill the tank?

### Options:

- 6 hours
- 7 hours
- 4 hours
- 9 hours

# Explanation:

## Step 1: Find the efficiency of each tap:

The part of the tank filled per hour by each tap is:

- P:  $\frac{1}{8}$  of the tank per hour
- Q:  $\frac{1}{12}$  of the tank per hour
- R:  $\frac{1}{24}$  of the tank per hour

## Step 2: Assume Total Time Taken is x Hours

- Tap P works for  $x-4$  hours.
- Tap Q works for  $x-3$  hours.
- Tap R works for the full  $x$  hours.

Thus, the total work done by all taps must be equal to 1 full tank:

$$(x - 4) \times \frac{1}{8} + (x - 3) \times \frac{1}{12} + x \times \frac{1}{24} = 1$$

## Step 3: Solve for x

**x= 7hrs**

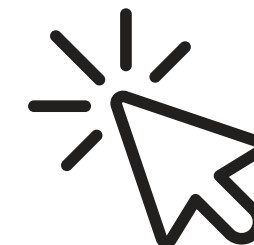


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## Question 5

A sequence of five consecutive even numbers is given in ascending order. The sum of squares of the second and fourth numbers equals 400. What is the average of all five numbers?

### Options:

- 10
- 12
- 14
- 16

# Explanation:

Let the five consecutive even numbers be:  $x, x+2, x+4, x+6, x+8$

Given that the sum of the squares of the second and fourth numbers is 400, we write:

$$(x + 2)^2 + (x + 6)^2 = 400$$

**$x = 10$ .**

**Find average:**

$$\frac{10 + 12 + 14 + 16 + 18}{5} = \frac{70}{5} = 14$$

# REASONING ABILITY

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PRIME CODING

# Question 1

Eleven friends A, B, C, D, E, F, G, H, I, J and K are sitting in the first row of the stadium watching a cricket match.

1. H is to the immediate left of D and third to the right of I.
2. J is the immediate neighbour of A and B and third to the right of K.
3. A is the second to the right of E, who is at one of the ends.
4. F is sitting next to the right of D and D is second to the right of C.

Who is sitting in the center of the row?

- A
- B
- I
- K

**Seating arrangement:**

**E K A J B I G C H D F**

**Answer: c(l)**



## Question 2

'A + B' means 'A is the wife of B'.

'A % B' means 'A is the daughter of B'.

'A \$ B' means 'A is the son of B'.

If  $P \% Q + R \$ S + T$ , which of the following statements is INCORRECT?

- Q is the mother of P.
- R is the husband of S.
- T is the father-in-law of Q.
- R is the son of S.

# Explanation:

Breaking down the given expression:

- P is the daughter of Q.
- Q is the wife of R.
- R is the son of S.
- S is the wife of T.

Now checking the statements:

1. Q is the mother of P. This is correct.
2. R is the husband of S. This is incorrect because R is actually S's son.
3. T is the father-in-law of Q. This is correct.
4. R is the son of S. This is correct.

The incorrect statement is "R is the husband of S."

## Question 3

Five trainers A, B, C, D, and E conduct training sessions for a group of employees between 9:00 AM and 2:00 PM. Each trainer takes a one-hour session in a specific order.

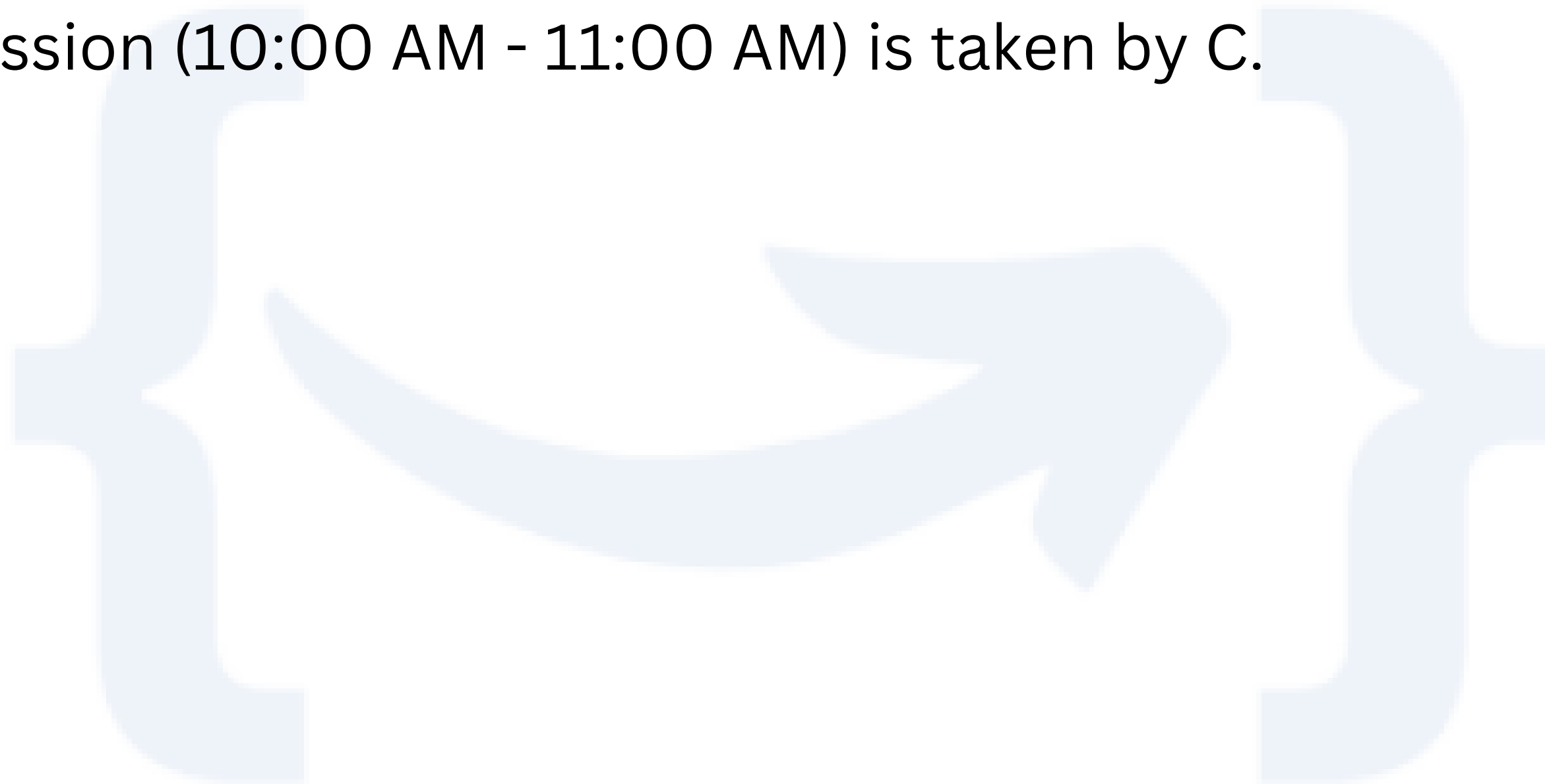
- B conducts the first session.
- D teaches immediately after E.
- C conducts the session before A and E.

Who conducts the second session from 10:00 AM to 11:00 AM?

1. A
2. E
3. D
4. C

## Explanation:

Since B takes the first session (9:00 AM - 10:00 AM) and C must come before A and E, the second session (10:00 AM - 11:00 AM) is taken by C.



## Question 4

You are given a question and two statements. Determine which statement(s) is/are sufficient to answer the question.

### Question:

When is Riya's birthday?

### Statements:

- It falls on the 10th day of a month.
- The month has 28 days in a common year and 29 days in a leap year.

### Options:

1. Only statement 1 is sufficient but statement 2 is not sufficient.
2. Both statement 1 and statement 2 are sufficient independently.
3. Only statement 2 is sufficient but statement 1 is not sufficient.
4. Both statement 1 and statement 2 are sufficient together.

## Explanation:

Statement 1 only gives the day but not the month, so it is not sufficient.

Statement 2 indicates February, but without the day, it is also not sufficient.

Together, they confirm February 10, making both statements sufficient when combined.



## Question 5

In each of the five pairs of letter clusters, the second term is a rearranged or transformed version of the first term following a specific pattern. Identify the two pairs that follow the same transformation rule.

- A. BRING : BGINR
- B. STORM : MROST
- C. CHAIR : ACHIR
- D. GLOVE : ELOVG
- E. POWER : EOPRW

- A and C
- C and D
- B and D
- A and E



# Explanation:

A and E are sorted alphabetically.





# VERBAL ABILITY

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PRIME CODING

# Question 1

For the four-sentence (S1 to S4) paragraph below, sentences S1 and S4 are given. From the options P, Q and R, choose appropriate sentences for S2 and S3 respectively.

S1: Why do birds sing?

S2: \_\_\_\_\_

S3: \_\_\_\_\_

S4: The length and complexity of the song give information about the health of the bird.

## Options:

P: Birds sing to warn other birds to stay off their territory.

Q: You might assume that birds sing because they are happy.

R: Birds also sing to find a healthy mate.

1. QR

2. QP

3. PQ

4. PR

# Explanation:

The best sequence is QP because:

- Q ("You might assume that birds sing because they are happy.") introduces a common assumption.
- P ("Birds sing to warn other birds to stay off their territory.") provides a factual reason, aligning with S4, which explains song complexity.

## Question 2

Which of the following sentences does NOT use casual language?

1. **Did you locate our office quite easily?**
2. **You will be working with different managers during your training**
3. **We shall endeavour to inform you of the position in two weeks time**
4. **Is there anything else you want to ask?**

# Explanation:

- "Did you find the restaurant without any trouble?" → Informal (Uses conversational tone with "without any trouble" instead of "locate").
- "You'll be meeting different team leaders throughout your training." → Informal (Uses contraction "You'll" instead of "You will" and a relaxed structure).
- "We shall make every effort to notify you of the decision within two weeks." → Formal (Uses "We shall," "make every effort," and "notify" instead of "let you know").
- "Do you have anything else you'd like to know?" → Informal (Uses contraction "you'd" and casual phrasing).

## Question 3

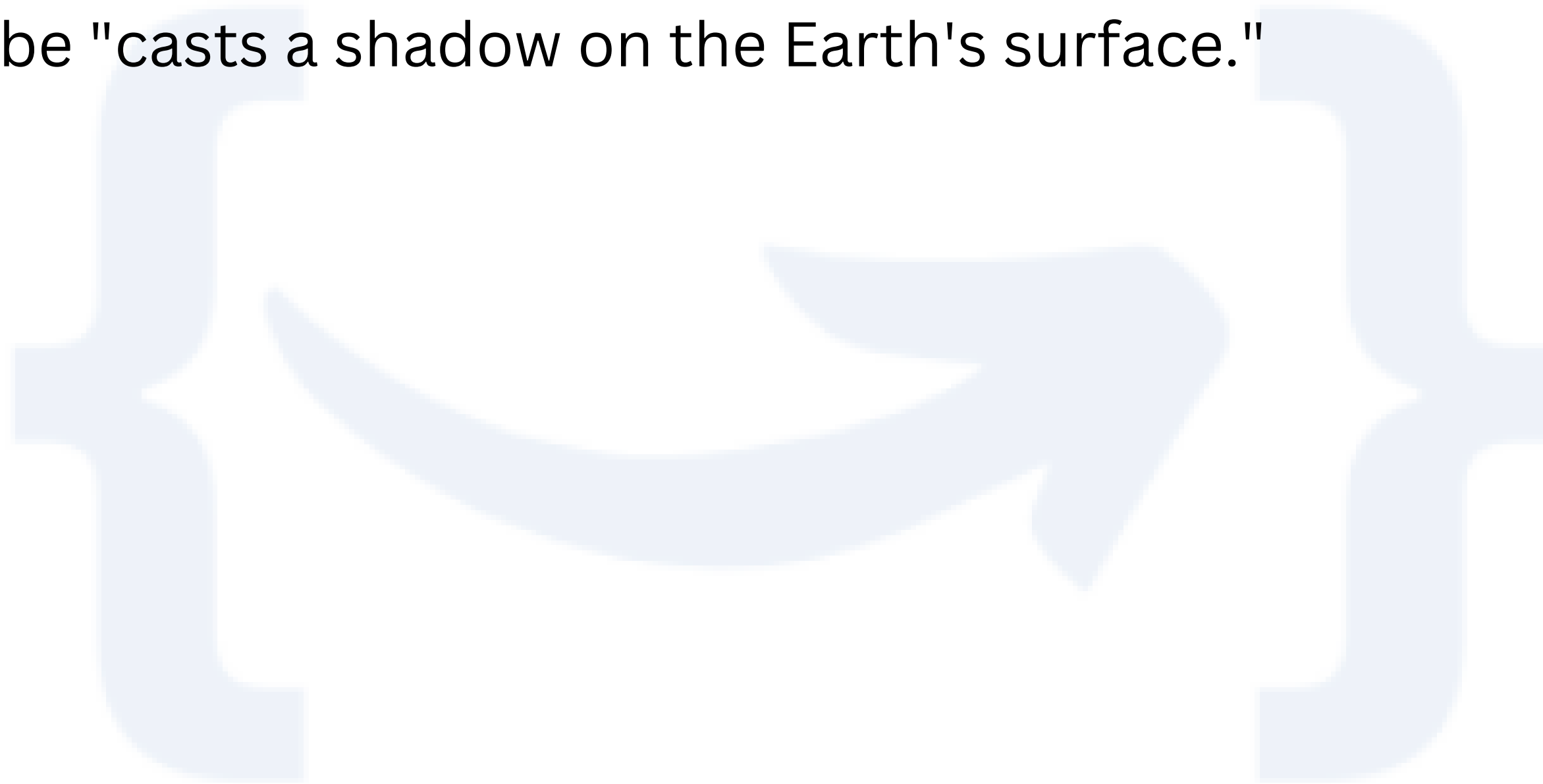
Identify the segment in the sentence which contains the grammatical error from the given options.

**A solar eclipse happens when the moon passes between the Earth and the sun casting a shadow over the Earth's surface.**

- A solar eclipse happens
- when the moon passes between
- casting a shadow over the Earth's surface
- the Earth and the sun

## Explanation:

The phrase "casting a shadow over the Earth's surface" is incorrect. The correct phrasing should be "casts a shadow on the Earth's surface."



## Question 4

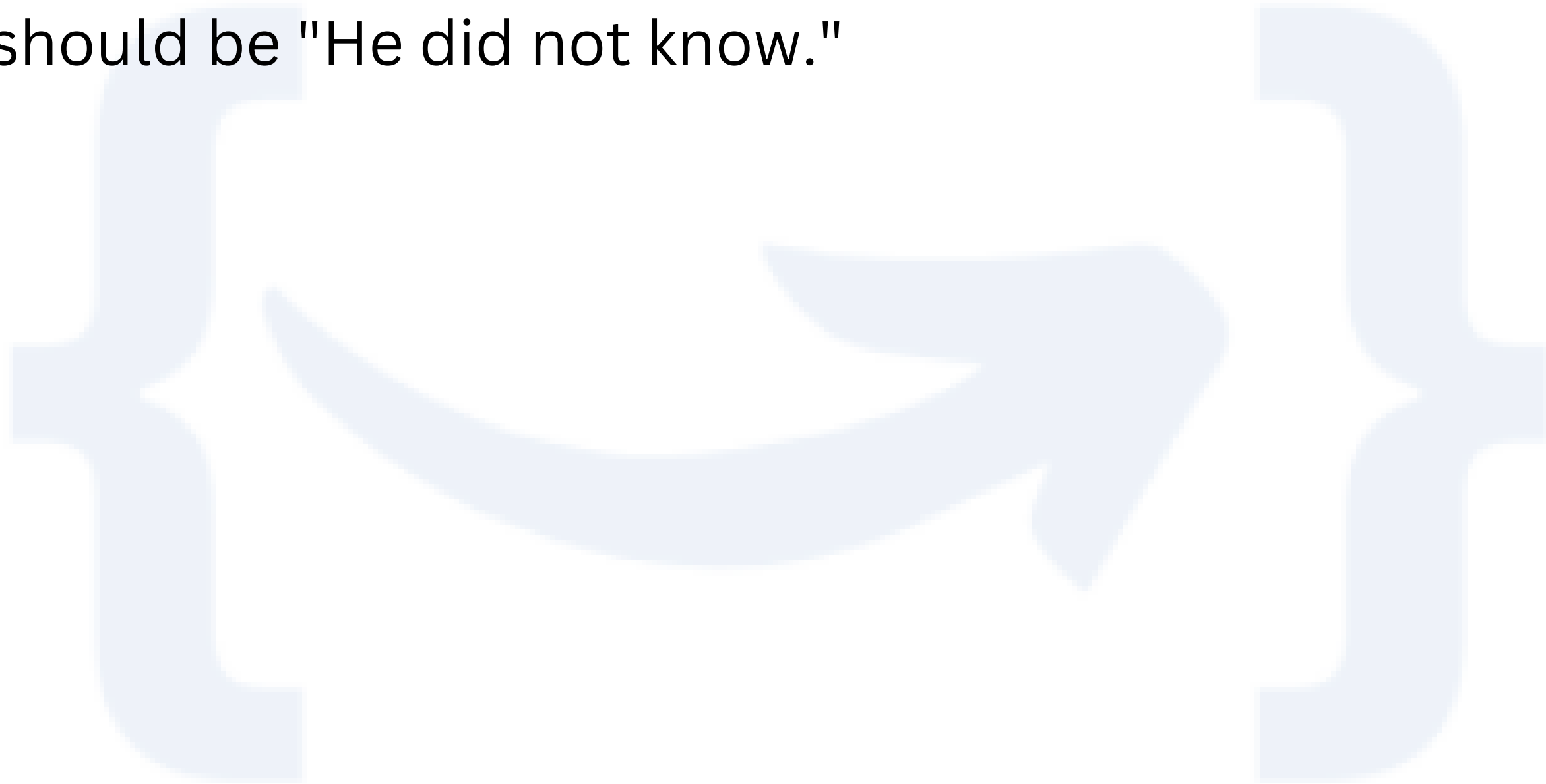
In the following sentence, some part may contain an error. Identify the incorrect segment and select the appropriate option. If the sentence is error-free, select No error.

(1) He did not knew /(2) that the meeting was postponed, so /(3) he arrived at the office on time. /(4) No error.



## Explanation:

The error is in Option 1: "He did not knew" because "did" already makes the sentence past tense, so it should be "He did not know."

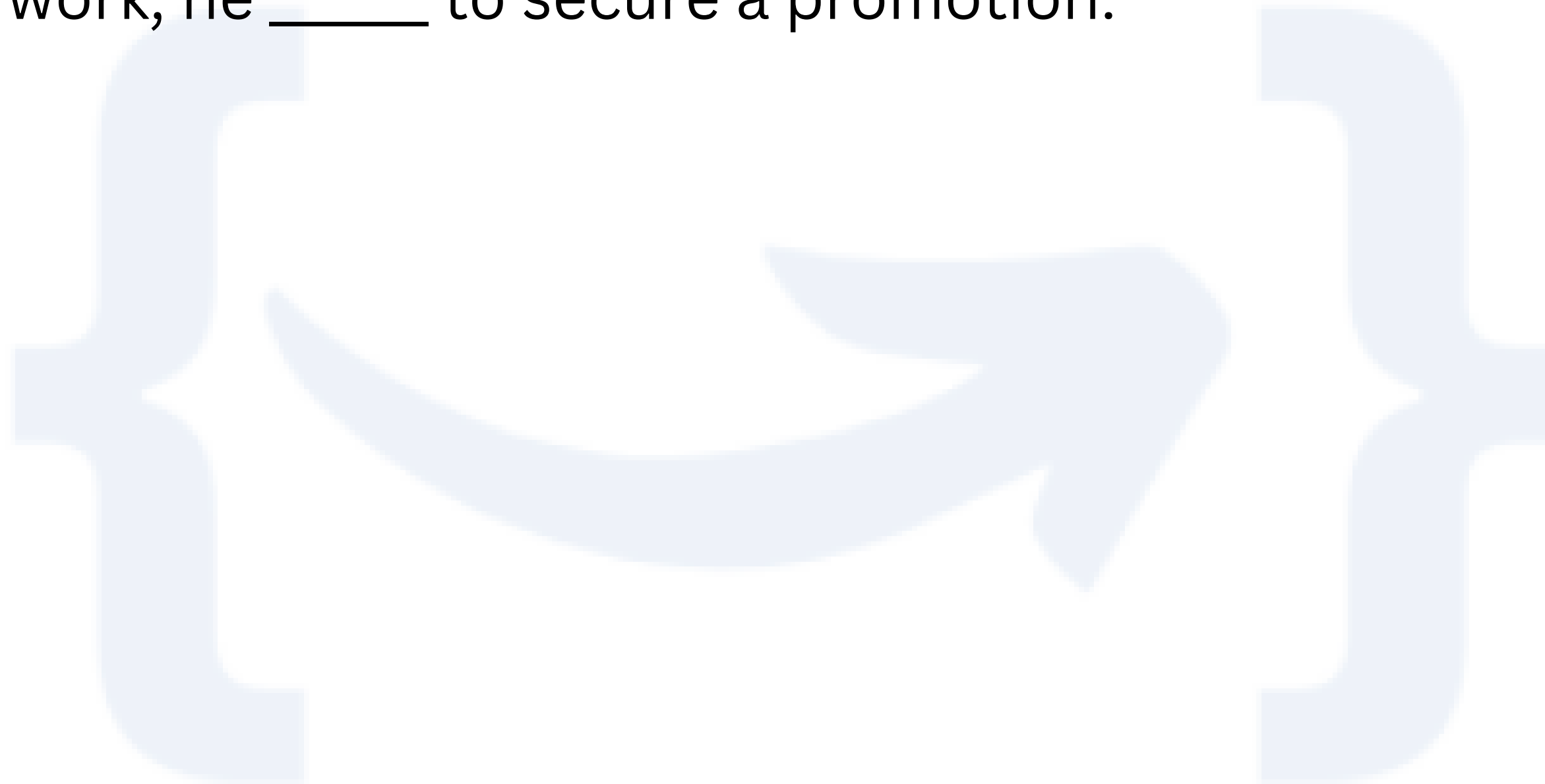


## Question 5

Select the most appropriate option to fill in the blank.

Despite his hard work, he \_\_\_\_\_ to secure a promotion.

- managed
- failed
- succeeded
- attempted



# Explanation:

The correct answer is "**failed**" because the sentence starts with "**Despite his hard work**," which suggests a contrast. This means that even though he worked hard, he did not get the promotion.

So, "**failed to secure a promotion**" makes the most sense



# NUMERICAL ABILITY

## HOMework QUESTIONS

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PRIME CODING

# Homework Question

A train is scheduled to complete a 240 km journey in 6 hours. Due to a slow start, it covers only 90 km in the first 3 hours. After that, it makes an unscheduled stop for 45 minutes. What speed must it maintain for the remaining journey to reach the destination on time?

- A) 50 km/h
- B) 60 km/h
- C) 75 km/h
- D) 80 km/h

Option C) 75 km/h

# Homework Question

A shopkeeper buys 40 kg of fresh mangoes for ₹1600. After drying, they are converted into dried mangoes, which he sells for ₹120 per kg. If 1 kg of fresh mangoes yields 600 g of dried mangoes, what is his profit or loss percentage?

## Options:

- A) 50% Profit
- B) 60% Profit
- C) 80% Profit
- D) 90% Profit

Option C) 80% Profit

# Homework Question

Three workers A, B, and C can complete a project in 12 hours, 18 hours, and 36 hours, respectively. All three start working together, but A stops 6 hours and B stops 3 hours before the project is completed. How much total time is required to complete the project?

Options:

- A) 10 hours
- B) 9 hours
- C) 8 hours
- D) 12 hours

Option a) 10 hours

# Homework Question

A farmer arranges five sacks of wheat in increasing order of weight. The sum of squares of the weights of the second and fourth sacks is  $650 \text{ kg}^2$ . What is the average weight of all five sacks?

Options:

- A) 16 kg
- B) 17 kg
- C) 18 kg
- D) 19 kg

Option C) 18 kg



# Homework Question

A shopkeeper increases the price of an item by 25% and sells it for ₹320, making 60% more profit than when he increases the price by 20% and sells it for ₹280. By what percentage is the profit when he increases the price by 30% less than the profit when he increases it by 40%?

- A) 16%
- B) 25%
- C) 20%
- D) 30%

Option b) 25%

# REASONING ABILITY

## HOMework QUESTIONS

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PRIME CODING

# Homework Question

Eleven friends M, N, O, P, Q, R, S, T, U, V and W are sitting in the first row of the stadium watching a cricket match.

1. T is to the immediate left of P and third to the right of U.
2. V is the immediate neighbour of M and N and third to the left of S.
3. M is the second to the right of Q, who is at one of the ends.
4. R is sitting next to the right of P and P is second to the right of O.

Who is sitting in the center of the row?

- A) N
- B) O
- C) S
- D) U

answer is D) U

# Homework Question

'A @ B' means 'A is the brother of B'. 'A # B' means 'A is the father of B'. 'A & B' means 'A is the sister of B'.

If  $P @ Q \# R \& S \# T$ , which of the following statements is CORRECT?

- a) P is the uncle of R
- b) Q is the grandfather of S
- c) T is the nephew of P
- d) S is the aunt of T

a) P is the uncle of R.

# Homework Question

Six professors P, Q, R, S, T, and U are scheduled to give lectures on different days of the week from Monday to Saturday, with one lecture per day.

- Q lectures on Wednesday.
- S lectures immediately before T.
- R lectures two days after P.
- U lectures on Monday.

Who gives the lecture on Friday?

- A) P
- B) R
- C) S
- D) T

# Homework Question

You are given a question and two statements. Determine which statement(s) is/are sufficient to answer the question.

Question: What is the two-digit number  $x$ ?

Statements:

- The sum of the digits of  $x$  is 11.
- The tens digit of  $x$  is twice the units digit.

Options:

- A) Only statement 1 is sufficient but statement 2 is not sufficient.
- B) Only statement 2 is sufficient but statement 1 is not sufficient.
- C) Both statement 1 and statement 2 are sufficient independently.
- D) Both statement 1 and statement 2 are sufficient together.
- E) Even with both statements, the answer cannot be determined.

E) Even with both statements, the answer cannot be determined.

# Homework Question

In each of the four pairs of letter clusters, the second term is derived from the first term following a specific pattern. Which pair follows a different transformation rule than the others?

- A. PLATE : ATELP
- B. CROWN : ROWNC
- C. DRINK : RINKD
- D. SMART : MARTS

A. PLATE : ATELP

# VERBAL ABILITY

## HOMework QUESTIONS

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PRIME CODING



# Homework Question

For the four-sentence (S1 to S4) paragraph below, sentences S1 and S4 are given. From the options P, Q and R, choose appropriate sentences for S2 and S3 respectively.

S1: Sleep plays a crucial role in maintaining overall health.

S2: \_\_\_\_\_

S3: \_\_\_\_\_

S4: Researchers continue to discover new benefits of quality sleep for cognitive performance.

Options:

P: Poor sleep has been linked to increased risk of heart disease and diabetes.

Q: During deep sleep, the brain consolidates memories and clears out toxins.

R: Many adults report getting less than the recommended seven hours of sleep per night.

A) QR

B) PQ

C) RP

D) PR

Option B (PQ)

# Homework Question

Choose the word that is most similar in meaning to "Resilient".

Options:

- A) Fragile
- B) Durable
- C) Weak
- D) Hesitant

B) Durable

# Homework Question

Identify the segment in the sentence which contains the grammatical error from the given options. The number of students attending the conference were higher than expected, which pleased the organizers greatly.

- A) The number of students attending the conference
- B) were higher than expected
- C) which pleased the organizers
- D) greatly

B) "were higher than expected."

# Homework Question

The scientist's theory was met with \_\_\_\_\_ from his peers, who found it difficult to accept such a radical idea.

Options:

- A) Admiration
- B) Skepticism
- C) Agreement
- D) Enthusiasm

B) Skepticism

# Homework Question

Arrange the following sentences in a logical sequence:

1. The teacher asked the students to submit their assignments.
2. Some students submitted their work on time.
3. Those who failed to do so were given an extension.
4. The deadline was last Friday.

Options:

- A) 1-4-2-3
- B) 4-1-3-2
- C) 1-2-3-4
- D) 2-3-4-1

A) 1-4-2-3