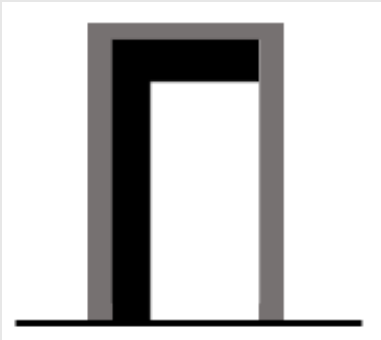


VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY
GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN		
DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

Following are the shadows cast in the openings of walls with different thickness. Based on the shadow cast, identify the wall opening which has greater thickness.

A.



C.



Source: CAAD - DRL

B.



D.



Answer key:

D.



Theory:

Shadows are the relatively dark figures cast upon a surface by an opaque body or part of a body intercepting the rays from a light source.

The shape of the shadow is dependent on

- The position of shade line & the observer, The direction of the light and the form of the surfaces on which the plane of the shadow falls
- When the object is not in contact with the ground, the shadow will be seen detached from the object

Suggested Reading: Basics of light and shadow

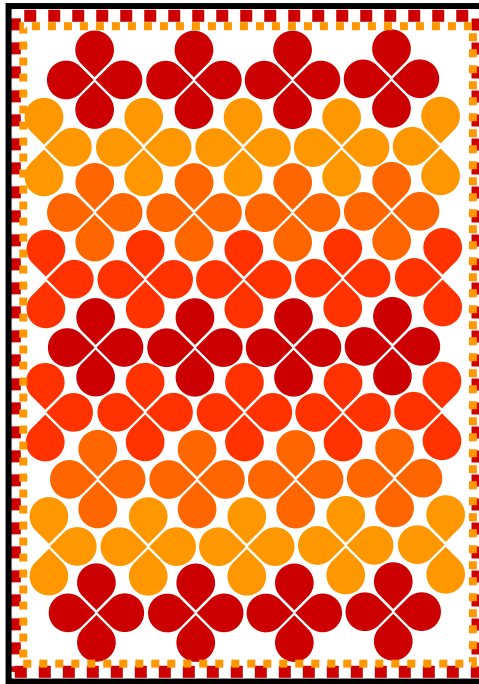
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NATA 2024 – CAAD BITESIZE

VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY
GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN		
DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

What type of colours are used to create the pattern in the blanket?



Source: CAAD-DRL

A. Primary Colours

B. Cool Colours

C. Secondary Colours

D. Warm Colours

Answer key:

Theory:

D. Warm Colours

Warm Colours

Warm colors consist of orange, red, yellow, and combinations of these and similar colors.

..



Suggested Reading: colour theory

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VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY
GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN		
DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

The cost of 4 bags and 3 boxes is Rs. 555 and the cost of 3 bags and 4 boxes is Rs. 460. What is the cost of one bag?

A. Rs. 100

B. Rs. 60

C. Rs. 120

D. Rs. 30

Answer key:

C. Rs. 120

Theory:

Let the cost of 1 bag be 'x' and cost of 1 box be 'y'.

Then, $4x + 3y = 555 \dots(i)$

and $3x + 4y = 460 \dots(ii)$

Adding (i) and (ii), we get:

$$7x + 7y = 1015$$

$$x + y = 145 \dots(iii)$$

Subtracting (ii) from (i), we get:

$$x - y = 95 \dots(iv)$$

Adding (iii) and (iv), we get:

$$2x = 240$$

$$x = 120$$

Hence, cost of 1 bag = Rs.120.

Suggested Reading: Basic Algebra

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VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY
GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN		
DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

13 chairs and 5 tables were bought for Rs.8280. If the average cost of a table be Rs. 1227, what is the average cost of a chair?

A. 125

B. 165

C.135

D. 150

Answer key:

B. 165

Theory:

$$\begin{aligned} \text{Total cost of 5 tables} &= \text{Rs. } (1227 \times 5) \\ &= \text{Rs. } 6135. \end{aligned}$$

$$\begin{aligned} \text{Total cost of 13 chairs} &= \text{Rs. } (8280 - 6135) \\ &= \text{Rs. } 2145. \end{aligned}$$

$$\begin{aligned} \text{Average cost of a chair} &= 2145/13 \\ &= \text{Rs. } 165. \end{aligned}$$

Suggested Reading: Basic Algebra

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GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN		
DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

This material used as mortar in building construction to bond brick, stone or concrete blocks into a structure.

A. Rubber

B. Steel

C. Glass

D. Cement

Answer key:

Theory:

D. Cement

In mortar, cement acts as a binding material with sand and water, and is applied as a paste which then sets hard. It is used for masonry work, plastering, repairing damaged concrete, patching or filling, rendering, floor leveling etc.

Suggested Reading: Basics of building materials

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GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN		
DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

Catenary arch reaching for the West, St. Louis gateway:



Source: Gateway Arch | Architecture, History, & St. Louis, Missouri | Britannica

A. Petronas Towers

C. Taipei 101

B. Burj Khalifa

D. Gateway Arch

Answer key:

Theory:

Explanation: The catenary arch shape, westward expansion connection, and St. Louis location uniquely distinguish the Gateway Arch, a soaring monument that celebrates American ambition and serves as a gateway to the West.

D) Gateway Arch

Suggested Reading: History of Architecture

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VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY
GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN		
DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

What is creativity in the context of architectural design?

- A. Following established design conventions
- B. Replicating existing architectural styles .
- C. Generating original and innovative design solutions
- D. Limiting design possibilities to predefined criteria

Answer key:

C. Generating original and innovative design solutions

Theory:

Creativity in architectural design involves the ability to generate original and innovative solutions to design challenges, often by thinking outside the box and exploring unconventional approaches to problem-solving.

Suggested Reading: Design Thinking

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DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

In the question given below, a part of the sentence is *italicised and underlined*. Below are given alternatives to the italicised part which may improve the sentence. Choose the correct alternative.

My mother bought ice creams *for my brother and me, but she didn't buy one herself.*

- | | |
|---|--|
| A. for my brother and me, but she didn't buy one for herself. | C. for my brother and I, but she didn't buy one for her. |
| B. for my brother and myself, but she didn't buy herself one. | D. for my brother and I, but she didn't buy one for herself. |

Answer key:

A. for my brother and me, but she didn't buy one for herself.

Theory:

Choice A

The pronoun 'I' is a subject pronoun, used when one is the doer of the action. The pronoun 'me', on the other hand, is an object pronoun. It is used when one is the receiver of the action.

The pronoun to be used in the given sentence is 'me', as it refers to the receiver of the action 'bought'. My mother bought ice creams for me (not for I).

Note that the use of the reflexive pronoun, 'myself' is also incorrect. A reflexive pronoun is used to reflect or emphasize its antecedent, the word the pronoun stands in for. 'My mother bought ice-creams for myself' is incorrect.

The other error in the given sentence is in the phrase 'didn't buy one herself'. This implies that she didn't buy the ice-creams, someone else did it for her. Clearly, that's not what is meant. She didn't buy one for herself. You could also say, 'she didn't buy herself one'.

The question is " Choose the grammatically correct option "

Hence, the answer is option A

Choice A is the correct answer.

Suggested Reading: Phrase Replacement

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DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

Two statements are given followed by two conclusions. Choose the conclusion(s) which best fit(s) logically. Ignore common known facts.

Statements:

- A. Some actors are singers.
- B. All the singers are dancers..

Conclusions:

- I. Some actors are dancers.
- II. No singer is actor.

A. Only Conclusion I follows.

C. Either I or II follows

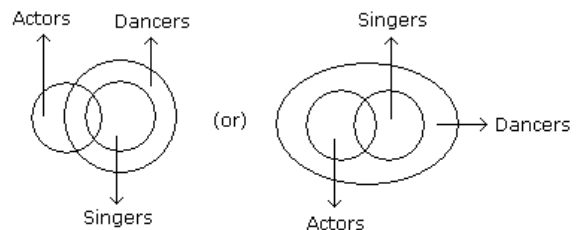
B. Only Conclusion II follows

D. Neither I nor II follows

Answer key:

Theory:

A: The illustration shows that only I follows.



Only (1) follows.

A. Only Conclusion I follows.

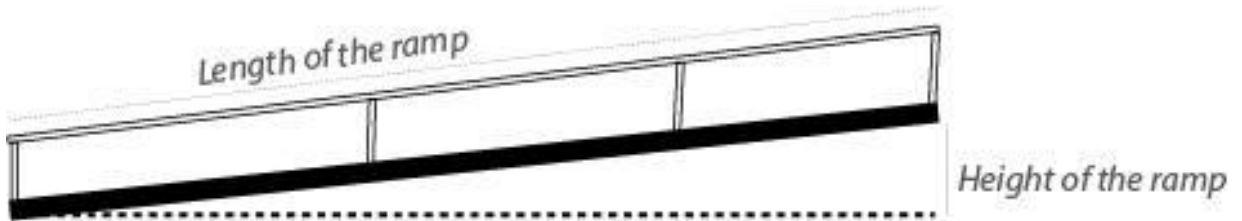
Suggested Reading: Syllogism

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With reference to the image below, which of the statement(s) is/are false?



- A. Ramps are good solution for standard wheel chair users to access any building with entry above ground level.
- B. Height along with the length of the ramp will determine if standard wheel chair users can use it without assistance.
- C. People on standard wheel chair will need assistance to go up and down shorter length ramps irrespective of its height
- D. A shorter length of ramp is convenient for standard wheel chair users without assistance, if the height of the ramp is high.

A. A, B	C. B, D
B. B, C	D. C, D

Answer key:

D. C, D

Theory:

D. C and D :

The statements C and D are false. Ramps are mainly for wheel chair users and a comfortable design with the right slope will ensure ease of usage. So A and B are true. The other two statements are not true and hence the correct answer is Option D.

Suggested Reading: Elements of Building Design

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