

# National Testing Agency

<b>Question Paper Name :</b>	B PLANNING AND B ARCH 5th Aug 2021 Shift 2
<b>Subject Name :</b>	B PLANNING AND B ARCH
<b>Creation Date :</b>	2021-08-05 19:19:58
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<b>Display Marks:</b>	Yes

## **B PLANNING AND B ARCH**

<b>Group Number :</b>	1
<b>Group Id :</b>	67603328
<b>Group Maximum Duration :</b>	0
<b>Group Minimum Duration :</b>	210
<b>Show Attended Group? :</b>	No
<b>Edit Attended Group? :</b>	No
<b>Break time :</b>	0
<b>Group Marks :</b>	500
<b>Is this Group for Examiner? :</b>	No

## **Mathematics Section A**

<b>Section Id :</b>	676033156
<b>Section Number :</b>	1
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	20
<b>Number of Questions to be attempted :</b>	20
<b>Section Marks :</b>	80

**Enable Mark as Answered Mark for Review and Clear Response :** Yes  
**Sub-Section Number :** 1  
**Sub-Section Id :** 676033156  
**Question Shuffling Allowed :** Yes

**Question Number : 1 Question Id : 6760332447 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**  
**Correct Marks : 4 Wrong Marks : 1**

The value of the integral  $\int_3^5 x\sqrt{(8-x)} dx$  is

**Options :**

6760337571.  $\frac{50\sqrt{5}}{3} + \frac{62\sqrt{3}}{5}$

6760337572.  $\frac{43\sqrt{7}}{5} + \frac{32\sqrt{2}}{3}$

6760337573.  $\frac{50\sqrt{5}}{3} - \frac{62\sqrt{3}}{5}$

6760337574.  $\frac{51\sqrt{6}}{7} - \frac{13\sqrt{7}}{3}$

**Question Number : 2 Question Id : 6760332448 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**  
**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

**Statement I :**

$$2^{\sin x} + 2^{\cos x} \geq 2^{1 - \frac{1}{\sqrt{2}}}, \forall x \in \mathbb{R}.$$

**Statement II :**

$$4^{\sin x} + 4^{\cos x} \geq 2^{1 - \sqrt{2}}, \forall x \in \mathbb{R}.$$

In the light of the above statements, choose the most appropriate answer from the options given below :

**Options :**

6760337575. Both Statement I and Statement II are correct.

6760337576. Both Statement I and Statement II are incorrect.

6760337577. Statement I is correct but Statement II is incorrect.

6760337578. Statement I is incorrect but Statement II is correct.

**Question Number : 3 Question Id : 6760332449 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Let  $\vec{a}$ ,  $\vec{b}$  and  $\vec{c}$  be three non-zero vectors, where  $\vec{r} \times \vec{a} = \vec{b} \times \vec{a}$  and

$\vec{r} \cdot \vec{c} = 0$ , where  $\vec{a} \cdot \vec{b} \neq 0$ ,  $\vec{a} \cdot \vec{c} \neq 0$ .

Then,  $\left( \frac{\vec{a} \cdot \vec{c}}{a \cdot c} \right) \left( \vec{r} \times \vec{b} \right) + \left( \frac{\vec{b} \cdot \vec{c}}{b \cdot c} \right) \left( \vec{a} \times \vec{b} \right)$  is

**Options :**

6760337579.  $-\left(\begin{matrix} \vec{a} & \vec{b} \end{matrix}\right) \vec{c}$

6760337580.  $\vec{0}$

6760337581.  $\vec{c}$

6760337582.  $\left(\begin{matrix} \vec{a} & \vec{b} \end{matrix}\right) \vec{c}$

**Question Number : 4 Question Id : 6760332450 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Let  $\alpha$  and  $\beta$  be two roots of the quadratic equation  $ax^2 + bx + c = 0$ , where  $a$ ,  $b$  and  $c$  are non-zero real numbers. The roots of the equation

$cx^2 + (b + 6c)x + (a + 3b + 9c) = 0$  are

**Options :**

6760337583.  $\frac{\alpha + 3}{\beta}$  and  $\frac{\beta - 3}{\alpha}$

6760337584.  $\frac{3}{\alpha}$  and  $\frac{\beta + 3}{\beta}$

6760337585.  $\frac{\alpha - 3}{\alpha}$  and  $\frac{3}{\beta}$

6760337586.  $\frac{1-3\alpha}{\alpha}$  and  $\frac{1-3\beta}{\beta}$

**Question Number : 5 Question Id : 6760332451 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Let  $\alpha$  be a positive real number such that  $x^2 + \alpha x + 6 = 0$  and  $\alpha(x^2 + 1) + 12x = 0$  have real roots. Then the maximum possible value of the real root of  $\sqrt{3}x^2 - x - 4\sqrt{3}\alpha = 0$  is

**Options :**

6760337587.  $2\sqrt{6}$

6760337588.  $\frac{4}{\sqrt{3}}$

6760337589.  $3\sqrt{3}$

6760337590. 6

**Question Number : 6 Question Id : 6760332452 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Find the equation of a circle which passes through the point  $(-1, 0)$  and whose center is the limit of the point of intersection of the lines  $x - 3y = 1$ , and

$(a - 2)x + 3a^2y = -1$ , when  $a$  tends to 1.

**Options :**

6760337591.  $81x^2 + 81y^2 - 108x + 18y - 189 = 0$

6760337592.  $81x^2 + 81y^2 - 108x + 9y - 189 = 0$

6760337593.  $x^2 + y^2 - 54x + 9y - 55 = 0$

6760337594.  $9x^2 + 9y^2 + 108x - 18y + 99 = 0$

**Question Number : 7 Question Id : 6760332453 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

A wire of length 12 meter is shaped into a figure that has a semicircle and a rectangle with one side of rectangle as the diameter of the semicircle. If the area of the figure is maximum, then the circumference of the semicircle is

**Options :**

6760337595.  $\frac{12\pi}{(\pi + 8)}$

6760337596.  $\frac{6(\pi + 2)}{(\pi + 8)}$

6760337597.  $\frac{\pi + 2}{(\pi + 8)}$

6760337598.  $\frac{12}{(\pi + 8)}$

**Question Number : 8 Question Id : 6760332454 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

If a curve  $y = y(x)$  passes through the point  $(1, e^2)$  and satisfies the differential

equation  $x \frac{dy}{dx} = y (\log_e y - \log_e x + 1)$ ,  $x > 0$ , then  $y(2)$  is equal to

**Options :**

6760337599.  $e^4$

6760337600.  $2e^4$

6760337601.  $\frac{5}{2}e^4$

6760337602.  $3e^4$

**Question Number : 9 Question Id : 6760332455 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

The equation of a plane, which passes through the point  $(1, 1, -1)$  and perpendicular to the line of intersection of the planes

$x + y + z = 3$ ,  $x - 2y + z = 3$  is

**Options :**

6760337603.  $x + y + 4z = -2$

6760337604.  $x + y + 2z = 0$

6760337605.  $x - z = 2$

6760337606.  $-x + 2z = -3$

**Question Number : 10 Question Id : 6760332456 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

The angle of elevation of the top of a tower from a point A due south of the tower is  $45^\circ$  and from a point B due east of the tower is  $30^\circ$ . If  $AB = 100$  meters, then the height of the tower is

(Note that tower is perpendicular to the plane which passes through the base of the tower and the points A, B.)

**Options :**

6760337607. 50 meters

6760337608.  $10\sqrt{30}$  meters

6760337609.  $\frac{100\sqrt{10}}{\sqrt{3}}$  meters

6760337610. 200 meters

**Question Number : 11 Question Id : 6760332457 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

If the shortest distance between the plane  $2x - 3y + 5z = 4$  and the line

$\frac{x-1}{4} = \frac{y+1}{11} = \frac{z-c}{d}$  is  $\frac{7}{\sqrt{152}}$  units, then which of the following is TRUE ?

**Options :**

6760337611.  $0 < c + d \leq 4$



6760337612.  $4 < c + d \leq 6$

6760337613.  $c + d > 6$

6760337614.  $c + d = 0$

**Question Number : 12 Question Id : 6760332458 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

The area of the region  $R = \{(x, y) : |x| \leq 1 - y^2\}$  is

**Options :**

6760337615.  $\frac{2}{3}$

6760337616.  $\frac{5}{2}$

6760337617.  $\frac{8}{3}$

6760337618.  $3$

**Question Number : 13 Question Id : 6760332459 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

The locus of the mirror image of the point  $(2, -1)$  through the lines pass through

the point  $\left(\frac{5}{2}, 0\right)$  is

**Options :**

6760337619.  $x^2 + y^2 - 5 = 0$

6760337620.  $x^2 + y^2 - 5x + 5 = 0$

6760337621.  $x^2 + y^2 - 5x - 5 = 0$

6760337622.  $x^2 + y^2 + 5y - 5 = 0$

**Question Number : 14 Question Id : 6760332460 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Let  $y = y(x)$  be the solution of the differential equation

$\cos x \frac{dy}{dx} + y \sin x = x^2 \cos^2 x, x \in \left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$ . If  $y(0) = 0$ , then  $y\left(\frac{\pi}{3}\right)$  is equal to

**Options :**

6760337623.  $\frac{\pi^3}{54\sqrt{3}}$

6760337624.  $\frac{\pi^3}{162}$

6760337625.  $\frac{\pi^3}{81\sqrt{2}}$

$$\frac{\pi^2}{54}$$

6760337626. **Question Number : 15 Question Id : 6760332461 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Let  $n$  be a natural number. Let

$p : n=3k+5$  for some integer  $k$

$q : n^2=3k+1$  for some integer  $k$

$r : n=3k+7$  for some integer  $k$

be logical statements. Then which of the following Boolean expressions is a tautology ?

**Options :**

6760337627.  $q \Rightarrow p$

6760337628.  $q \Rightarrow r$

6760337629.  $q \Rightarrow p \vee r$

6760337630.  $p \wedge q \Rightarrow r$

**Question Number : 16 Question Id : 6760332462 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

If  $\left| \vec{p} + \vec{q} \right| = \lambda$ ,  $\left( \vec{p} + \vec{q} \right) \cdot \left( -7\hat{i} + 2\hat{j} + 3\hat{k} \right) = 4$  and

$\vec{p} \times \left( 2\hat{i} + 3\hat{j} + 4\hat{k} \right) = (2i + 3j + 4k) \times \vec{q}$ , then  $\lambda$  is equal to

Options :

6760337631.  $\frac{\sqrt{29}}{8}$

6760337632.  $\sqrt{29}$

6760337633.  $\frac{\sqrt{29}}{2}$

6760337634.  $2\sqrt{29}$

**Question Number : 17 Question Id : 6760332463 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

If  $Q = \begin{bmatrix} \frac{1}{\sqrt{2}} & \frac{1}{\sqrt{2}} \\ -\frac{1}{\sqrt{2}} & \frac{1}{\sqrt{2}} \end{bmatrix}$  and  $A = \begin{bmatrix} x & x \\ 0 & x \end{bmatrix}$ , where  $x$  is a cube root of unity and

$P = QAQ^T$ , then the matrix  $Q^T P^{1707} Q$  is

(Where  $Q^T$  denote transpose of matrix  $Q$ )

Options :

$$6760337635. \begin{bmatrix} 1 & 1 \\ 0 & 1 \end{bmatrix}$$

$$6760337636. \begin{bmatrix} 1 & 569 \\ 0 & 1 \end{bmatrix}$$

$$6760337637. \begin{bmatrix} 1 & 1707 \\ 0 & 1 \end{bmatrix}$$

$$6760337638. \begin{bmatrix} x & 1707x \\ 0 & x \end{bmatrix}$$

**Question Number : 18 Question Id : 6760332464 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

A plane of an army is flying along the curve  $y = x^2 + 2$ . A soldier is placed at the point (3, 2). The nearest distance of the soldier from the plane is

**Options :**

$$6760337639. \sqrt{2}$$

$$6760337640. \sqrt{3}$$

$$6760337641. \sqrt{5}$$

$$6760337642. \sqrt{7}$$

Question Number : 19 Question Id : 6760332465 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No  
Correct Marks : 4 Wrong Marks : 1

The common tangents of two ellipses  $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$  and  $\frac{x^2}{b^2} + \frac{y^2}{a^2} = 1$ ,  $a \neq b$ , is also tangent to a circle centered at the origin. Then the equation of the circle is

Options :

6760337643.  $x^2 + y^2 = \frac{(a^2 + b^2)}{2}$

6760337644.  $x^2 + y^2 = (a^2 + b^2)$

6760337645.  $x^2 + y^2 = \sqrt{2}(a^2 + b^2)$

6760337646.  $x^2 + y^2 = \frac{(a^2 + b^2)}{\sqrt{2}}$

Question Number : 20 Question Id : 6760332466 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No  
Correct Marks : 4 Wrong Marks : 1

If  $0 < \alpha, \beta < \frac{\pi}{2}$  and  $\alpha + 2\beta = \pi$ , then the minimum value of

$\sin^2(\alpha + \beta) + \sin^2(\alpha - \beta)$  is

Options :

6760337647.  $\frac{5}{\sqrt{6}}$

6760337648.  $\frac{5}{2\sqrt{6}}$

6760337649.  $1 - \frac{3}{2\sqrt{6}}$

6760337650.  $1 - \frac{2}{3\sqrt{6}}$

## Mathematics Section B

<b>Section Id :</b>	676033157
<b>Section Number :</b>	2
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	10
<b>Number of Questions to be attempted :</b>	5
<b>Section Marks :</b>	20
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	676033157
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 21 Question Id : 6760332467 Question Type : SA**

**Correct Marks : 4 Wrong Marks : 0**

The base of an equilateral triangle of which one of the vertex is (3, 0), is along the line  $x + \sqrt{2}y = 2$ . Then the perimeter of the triangle is \_\_\_\_\_.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Equal**

**Text Areas : PlainText**

**Possible Answers :**

100

**Question Number : 22 Question Id : 6760332468 Question Type : SA**

**Correct Marks : 4 Wrong Marks : 0**

If the variance of  $n(>1)$  numbers  $a+b, 2a+b, 3a+b, \dots, na+b$  is  $3n^2 - 3$ ,  
then the value of  $|a|$  is \_\_\_\_\_.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Equal**

**Text Areas : PlainText**

**Possible Answers :**

100

**Question Number : 23 Question Id : 6760332469 Question Type : SA**

**Correct Marks : 4 Wrong Marks : 0**

The least number of times a man should toss a fair coin, so that the probability of having at least one head is more than 0.9, is \_\_\_\_\_.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Equal**

**Text Areas : PlainText**

**Possible Answers :**

100



**Question Number : 24 Question Id : 6760332470 Question Type : SA**

**Correct Marks : 4 Wrong Marks : 0**

The number of positive integral solutions of  $abc=30$  is \_\_\_\_\_.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Equal**

**Text Areas : PlainText**

**Possible Answers :**

100

**Question Number : 25 Question Id : 6760332471 Question Type : SA**

**Correct Marks : 4 Wrong Marks : 0**

Let be a function defined as  $5f\left(\frac{3}{x+y}\right) = f\left(\frac{3}{x}\right) + f\left(\frac{3}{y}\right)$ , for all  $x, y > 0$ .

If  $x+y+z=3$ ,  $x, y, z > 0$ , and  $f\left(\frac{3}{x}\right) + f\left(\frac{3}{y}\right) + f\left(\frac{3}{z}\right) = cf(1) \neq 0$ , then value of

$14c$  is \_\_\_\_\_.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Equal**

**Text Areas : PlainText**

**Possible Answers :**

100

**Question Number : 26 Question Id : 6760332472 Question Type : SA**

**Correct Marks : 4 Wrong Marks : 0**

If  $A = \begin{bmatrix} 1 & 0 & 0 \\ 2 & -1 & 0 \\ 5 & -4 & 2 \end{bmatrix}$  and R, S are two  $3 \times 1$  column matrices such that  $AR = \begin{bmatrix} 2 \\ 1 \\ 3 \end{bmatrix}$

and  $AS = \begin{bmatrix} -1 \\ 0 \\ 3 \end{bmatrix}$ , then the modulus of  $R^T S$  is \_\_\_\_\_.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

100

**Question Number :** 27 **Question Id :** 6760332473 **Question Type :** SA

**Correct Marks :** 4 **Wrong Marks :** 0

The number of elements  $a$  in the open interval  $(-2, 2)$  such that the limit

$\lim_{x \rightarrow a} \left( [x^2 - 1] - [1 - x] \right)$  does not exist, is \_\_\_\_\_.

( $[x]$  denotes the greatest integer value of  $x$ )

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

100

**Question Number : 28 Question Id : 6760332474 Question Type : SA**

**Correct Marks : 4 Wrong Marks : 0**

The remainder when  $(25)^{98}$  is divided by 11, is \_\_\_\_\_.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Equal**

**Text Areas : PlainText**

**Possible Answers :**

100

**Question Number : 29 Question Id : 6760332475 Question Type : SA**

**Correct Marks : 4 Wrong Marks : 0**

Let  $[x]$  be the greatest integer less than or equal to  $x$ . If  $\sum_{n=3}^{26} \left[ \frac{n^2 + 1}{2} \right] = 13k - 3$ ,

then  $k$  is equal to \_\_\_\_\_.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Equal**

**Text Areas : PlainText**

**Possible Answers :**

100

**Question Number : 30 Question Id : 6760332476 Question Type : SA**

**Correct Marks : 4 Wrong Marks : 0**

If  $a_1, a_2, a_3, \dots$  is an arithmetic progression such that

$a_1 + a_4 + a_8 + a_{13} + a_{17} + a_{20} = 225$ , then the sum of its first twenty terms is \_\_\_\_\_.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Equal

**Text Areas :** PlainText

**Possible Answers :**

100

## Aptitude Test

<b>Section Id :</b>	676033158
<b>Section Number :</b>	3
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	50
<b>Number of Questions to be attempted :</b>	50
<b>Section Marks :</b>	200
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	676033158
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 31 Question Id : 6760332477 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Which one of the following is listed as UNESCO world heritage site till December, 2020 ?

**Options :**

6760337661. Manas National Park

6760337662. Rajaji National Park

6760337663. Jim Corbett National Park

6760337664. Kanha National Park

**Question Number : 32 Question Id : 6760332478 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Which type of floor will be helpful for a blind person for walking ?

**Options :**

6760337665. Rough Tactile Floor

6760337666. Floor with sign language

6760337667. Smooth surface floor

6760337668. Specific tactile pattern floor

**Question Number : 33 Question Id : 6760332479 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

## Sequencing

- (A) Humayun
- (B) Shahjahan
- (C) Aurangzeb
- (D) Akbar
- (E) Jahangir

Choose the correct answer from the options as given below :

**Options :**

6760337669. A, B, D, E, C

6760337670. A, D, B, E, C

6760337671. A, D, E, B, C

6760337672. A, E, B, D, C

**Question Number : 34 Question Id : 6760332480 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

First state of India which has made roof-top rainwater harvesting structures compulsory -

**Options :**

6760337673. Tamil Nadu

6760337674. Uttarakhand

6760337675. Punjab

6760337676. Odisha

**Question Number : 35 Question Id : 6760332481 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Limestone as raw material is used in

**Options :**

6760337677. Aluminium

6760337678. Cement

6760337679. Plastic

6760337680. Automobile

**Question Number : 36 Question Id : 6760332482 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The famous star temple is located in which one of the following states ?

**Options :**

6760337681. Odisha

6760337682. Madhya Pradesh

6760337683. Uttar Pradesh

6760337684. Haryana

**Question Number : 37 Question Id : 6760332483 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Drawings of the buildings are drawn using –

**Options :**

6760337685. Reducing scale

6760337686. Actual scale

6760337687. Chord scale

6760337688. Diagonal scale

**Question Number : 38 Question Id : 6760332484 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following colour shows the ambition ?

**Options :**

6760337689. Green

6760337690. Black

6760337691. Dark Green

6760337692. Dark Blue



**Question Number : 39 Question Id : 6760332485 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

‘Mehrangarh Fort’ situated in which city ?

**Options :**

6760337693. Jodhpur

6760337694. Udaipur

6760337695. Jaipur

6760337696. Jaisalmer

**Question Number : 40 Question Id : 6760332486 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

‘Frank Lloyd Wright’ the famous architect was born in which country ?

**Options :**

6760337697. USA (United States of America)

6760337698. Britain

6760337699. Australia

6760337700. Canada

**Question Number : 41 Question Id : 6760332487 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Who is the Artist of famous picture ‘The Virgin of the Rocks’ ?

**Options :**

6760337701. Pablo Picasso

6760337702. Andy Warhole

6760337703. Leonardo da Vinci

6760337704. Uincent Van Gogh

**Question Number : 42 Question Id : 6760332488 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The word 'Torna' is synonymous to which of the following element of the building ?

**Options :**

6760337705. Arch

6760337706. Pillar

6760337707. Window

6760337708. Gate

**Question Number : 43 Question Id : 6760332489 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following architects has designed the 'New Central Vista' in New Delhi ?

**Options :**

6760337709. Charels Correa

6760337710. Christopher Benninger

6760337711. Bimal Patel

6760337712. B. V. Doshi

**Question Number : 44 Question Id : 6760332490 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

One is labelled as Assertion A and the other is labelled as Reason R.

**Assertion A :** Traditional buildings all over the world use locally available material for construction.

**Reason R :** The locally available materials are structurally most stable and hence used in construction of traditional buildings.

In the light of the above statements, choose the correct answer from the options given below.

**Options :**

6760337713. Both 'A' and 'R' are correct 'R' is the correct explanation of 'A'.

6760337714. Both 'A' and 'R' are correct but 'R' is not the correct explanation of 'A'.

6760337715. 'A' is correct but 'R' is not correct.

6760337716. 'A' is not correct but 'R' is correct.

**Question Number : 45 Question Id : 6760332491 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

First platinum Rated Green Building in India is located in which city ?

**Options :**

6760337717. Mumbai

6760337718. New Delhi

6760337719. Hyderabad

6760337720. Bangalore

**Question Number : 46 Question Id : 6760332492 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Master Plan of Capital City ‘Amaravati’ was designed in 2014 by which of the following architect ?

**Options :**

6760337721. Zaha Hadid

6760337722. Bimal Patel

6760337723. Richard Mier

6760337724. Norman Foster

**Question Number : 47 Question Id : 6760332493 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

9/11 attack was done on which of the following building ?

**Options :**

6760337725. World Trade Centre

6760337726. Patronus Tower

6760337727. Taj Mahal

6760337728. White House

**Question Number : 48 Question Id : 6760332494 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which city in India is listed as a UNESCO World Heritage site in 2019 ?

**Options :**

6760337729. Mysore

6760337730. Jaipur

6760337731. Jaisalmer

6760337732. Banaras

**Question Number : 49 Question Id : 6760332495 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The famous cave 'Elora' is dedicated to which Lord ?

**Options :**

6760337733. Shiva

6760337734. Vishnu

6760337735. Ganesha

6760337736. Indra

**Question Number : 50 Question Id : 6760332496 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

The famous theatre 'Rajmandir' is located in which city ?

**Options :**

6760337737. Gujarat

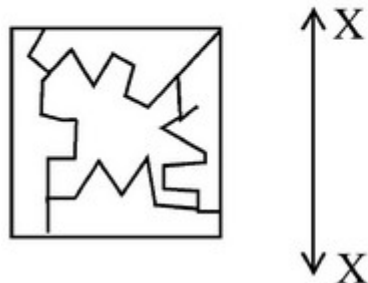
6760337738. Jaipur

6760337739. Gandhinagar

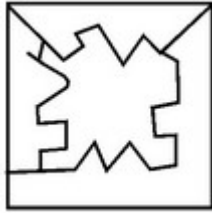
6760337740. Udaipur

**Question Number : 51 Question Id : 6760332497 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

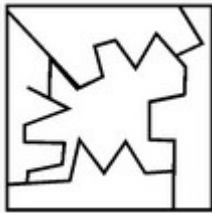
Which one of the following answers figure is the correct mirror image of the problem figure with respect to X-X ?



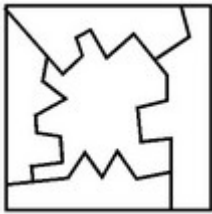
**Options :**



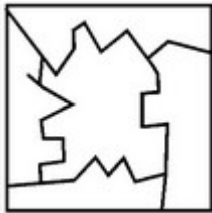
6760337741.



6760337742.



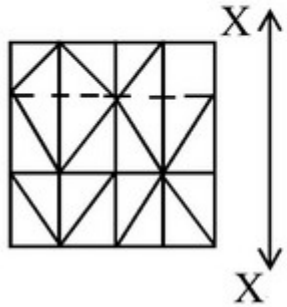
6760337743.



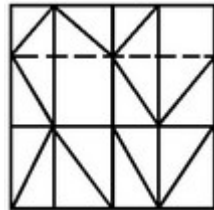
6760337744.

**Question Number : 52 Question Id : 6760332498 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

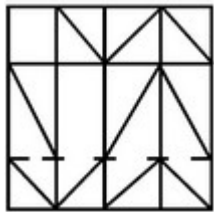
Which one of the answers figure is the correct mirror image of problem figure with respect to X-X ?



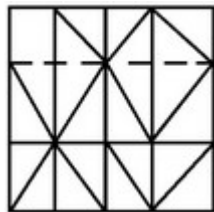
Options :



6760337745.



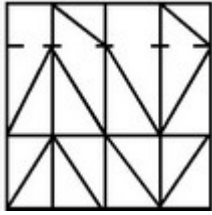
6760337746.



6760337747.

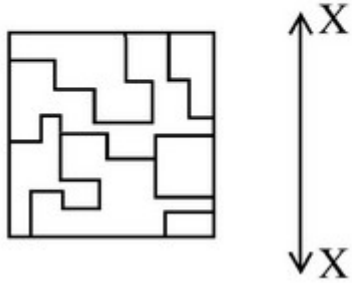


6760337748.



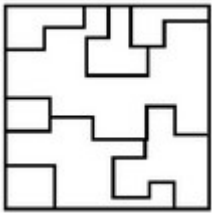
**Question Number : 53 Question Id : 6760332499 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Which one of the answer figures is correct mirror image of problem figure with respect to X-X ?

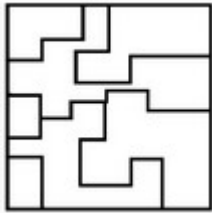


**Options :**

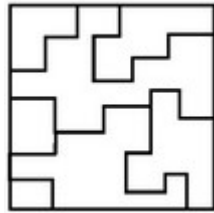
6760337749.



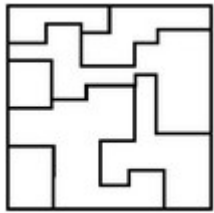
6760337750.



6760337751.



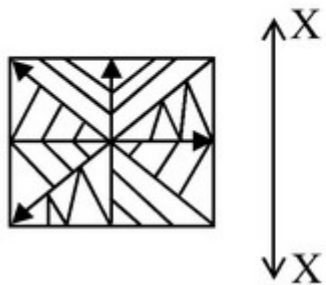
6760337752.



**Question Number : 54 Question Id : 6760332500 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

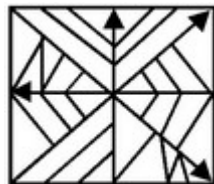
**Correct Marks : 4 Wrong Marks : 1**

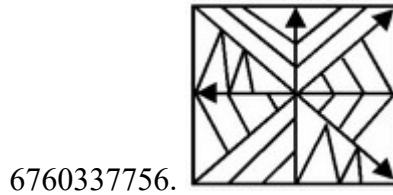
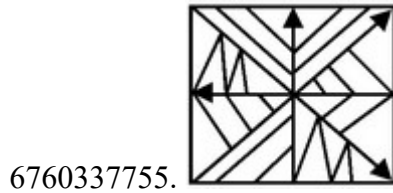
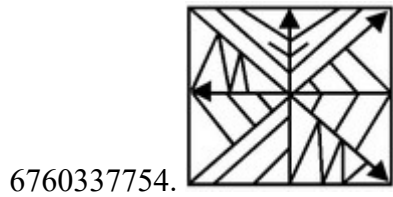
Which one of the answer figures is correct mirror image of the problem figure with respect to X-X ?



**Options :**

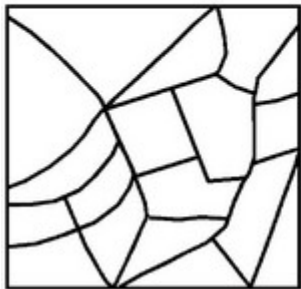
6760337753.






**Question Number : 55 Question Id : 6760332501 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**


One of the following answer figures is hidden in problem figure in same size and direction. Select the correct one.




**Options :**



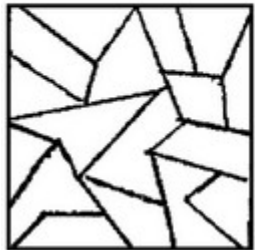
6760337758. 

6760337759. 


6760337760. 


**Question Number : 56 Question Id : 6760332502 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

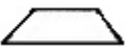
One of the following answer figures is hidden in the problem figure in same size and direction. Select correct one.



**Options :**

6760337761. 

6760337762. 

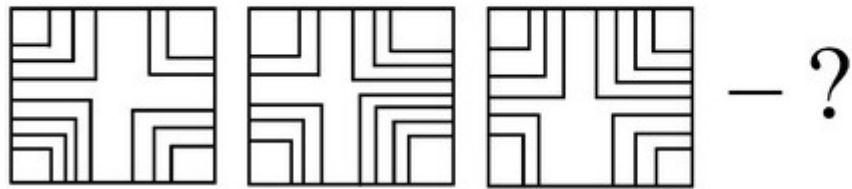
6760337763. 

6760337764.

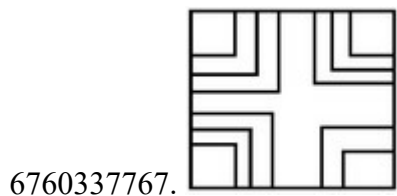
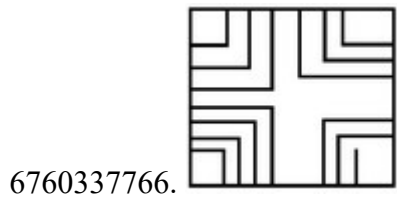
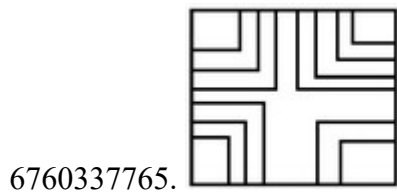


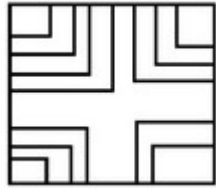
**Question Number : 57 Question Id : 6760332503 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Which one of the answer figures will complete the sequence of the three problem figures ?



**Options :**

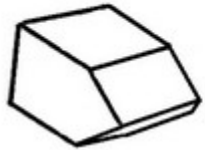




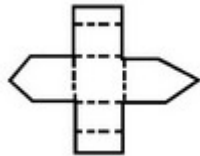
6760337768.

**Question Number : 58 Question Id : 6760332504 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

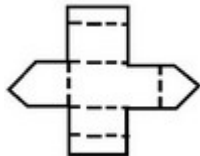
Which one of the answer figures shows the correct view of 3-D image unfold.



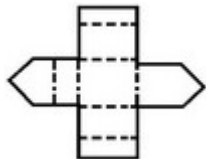
**Options :**



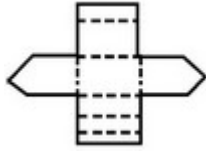
6760337769.



6760337770.



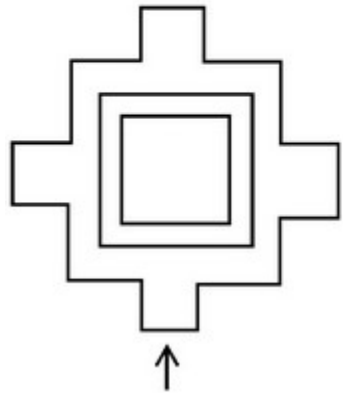
6760337771.



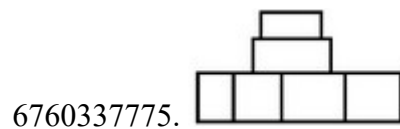
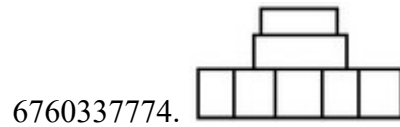
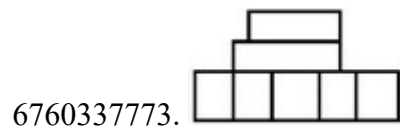
6760337772.

**Question Number : 59 Question Id : 6760332505 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

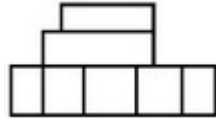
The problem figure shows the top view of an object. Identify the correct elevation from the answer figures looking in the direction of arrow.



**Options :**

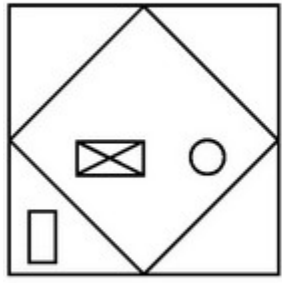


6760337776.

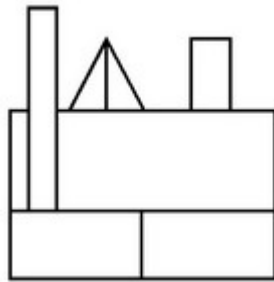


**Question Number : 60 Question Id : 6760332506 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

The problem figure shows the top view of an object. Identify the correct elevation from the answer figures looking in the direction of arrow.

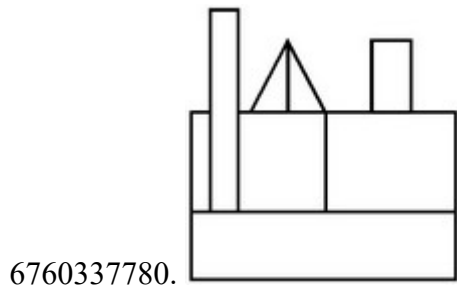
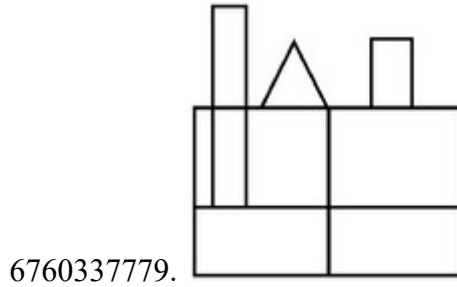
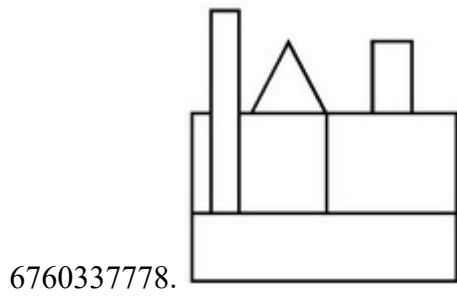


**Options :**



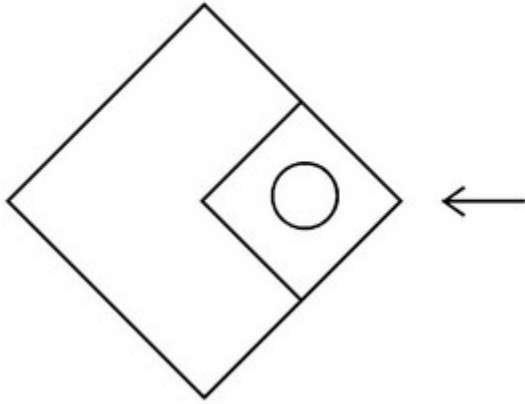
6760337777.



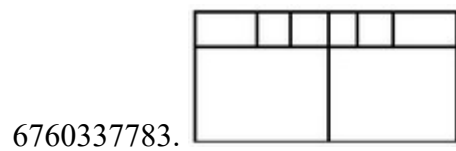
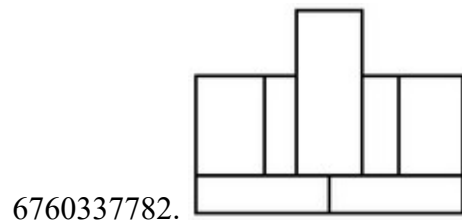
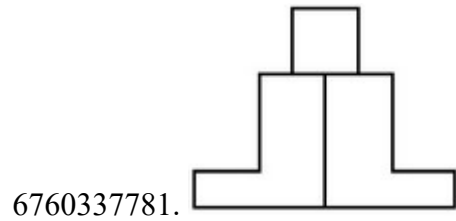


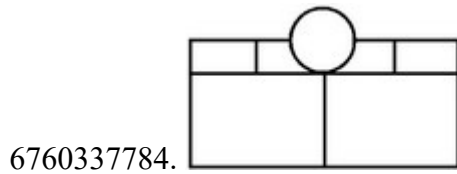
**Question Number : 61 Question Id : 6760332507 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

The problem figure shows the top view of an object. Which one of the following is not the probable elevation, looking in the direction of arrow ?



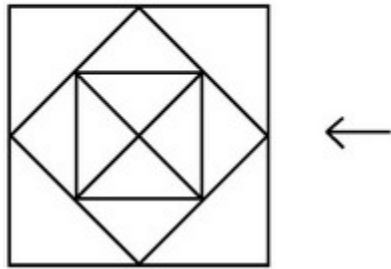
Options :



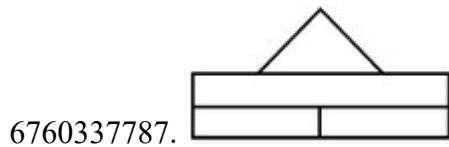
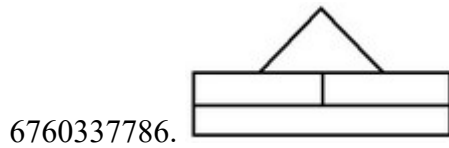
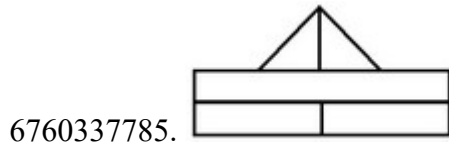


**Question Number : 62 Question Id : 6760332508 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

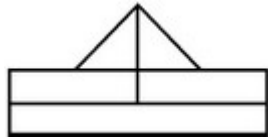
The problem figure shows the top view of an object. Identify the correct elevation looking in the direction of arrow, from the answer figures.



**Options :**

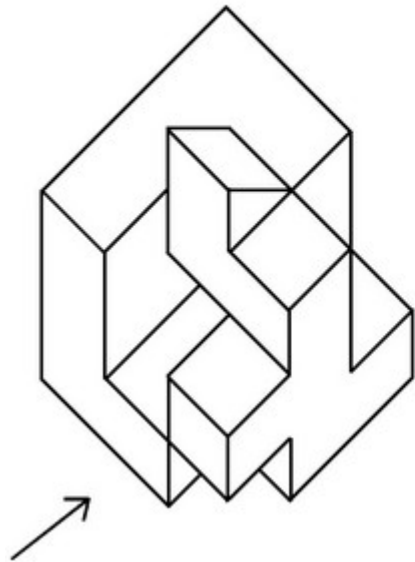


6760337788.

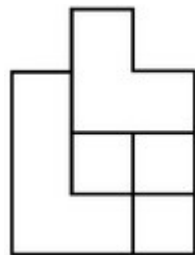


**Question Number : 63 Question Id : 6760332509 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

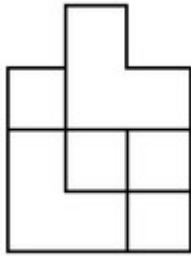
The 3D figure shows the view of an object. Identify the correct view looking in the direction of arrow, from the answer figures.



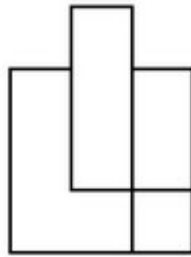
**Options :**



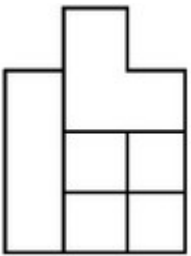
6760337789.



6760337790.



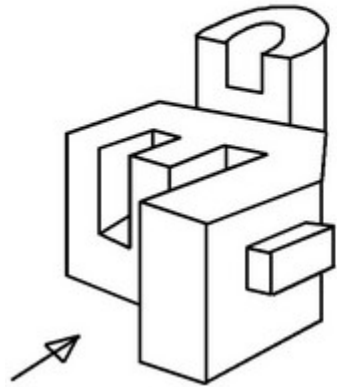
6760337791.



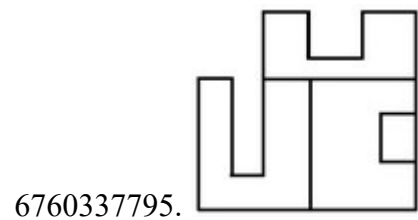
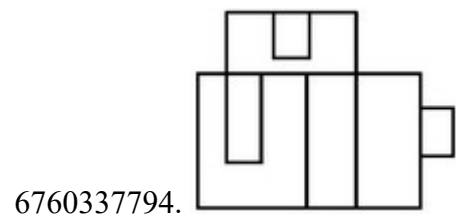
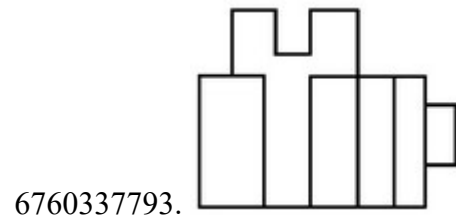
6760337792.

**Question Number : 64 Question Id : 6760332510 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

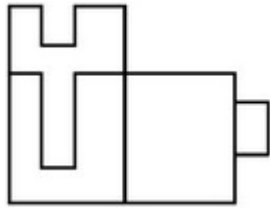
The 3D figure shows the view of an object. Identify the correct view looking in the direction of arrow, from the answer figures.



Options :

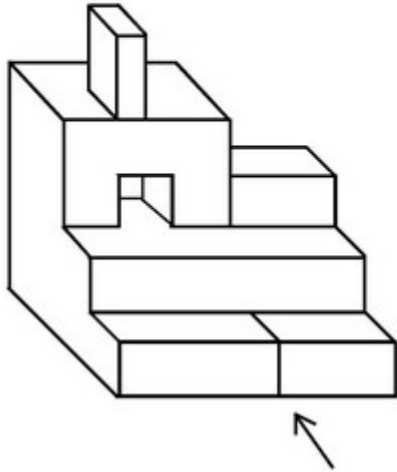


6760337796.

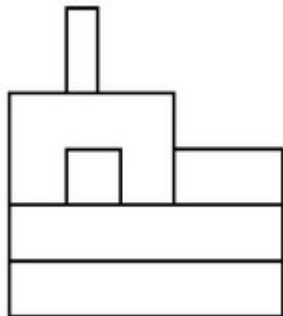


**Question Number : 65 Question Id : 6760332511 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

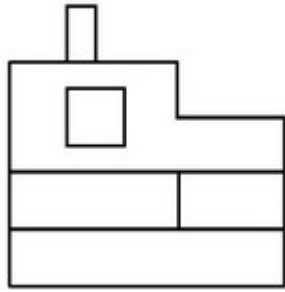
The 3D figure shows the view of an object. Identify the correct view looking in the direction of arrow, from the answer figures.



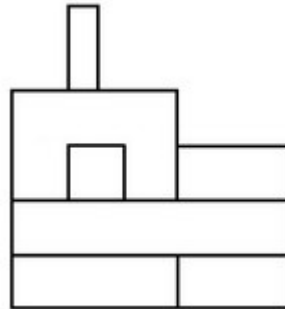
**Options :**



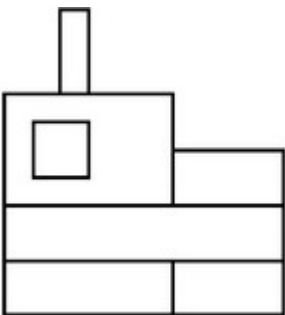
6760337797.



6760337798.



6760337799.

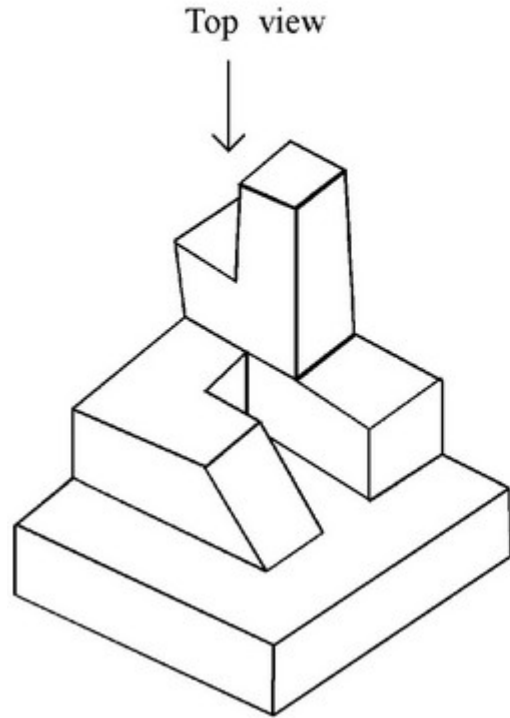


6760337800.

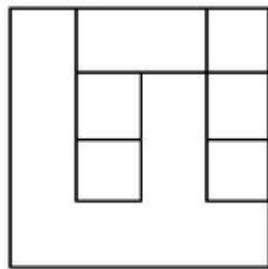
**Question Number : 66 Question Id : 6760332512 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**



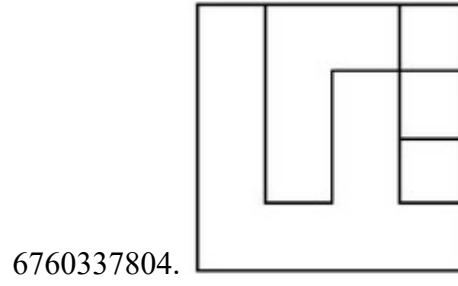
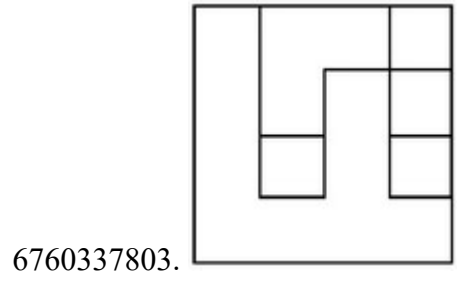
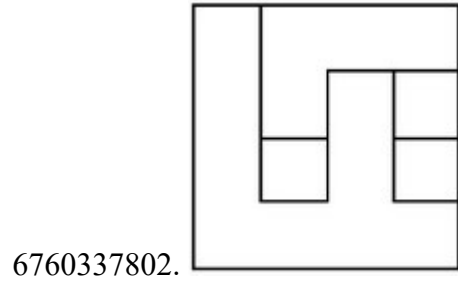
The 3D-figure shows view of an object. Identify the correct top view, from the answer figures.



Options :

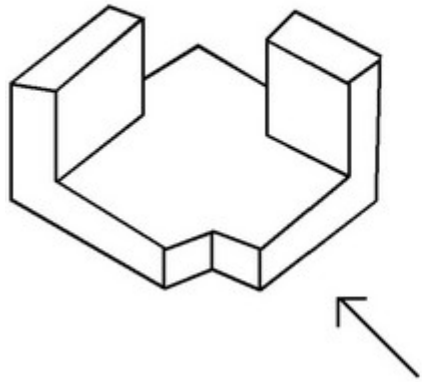


6760337801.

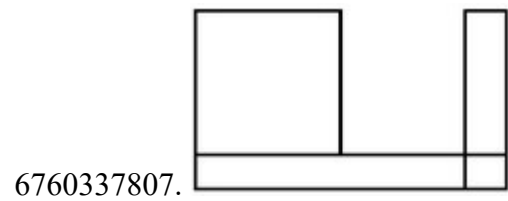
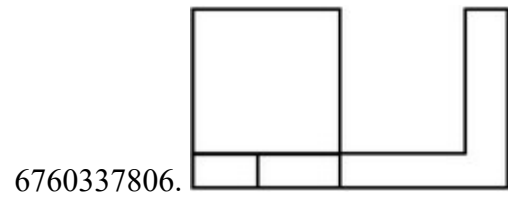
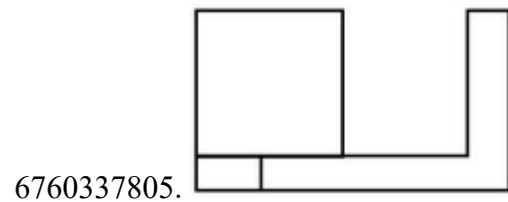


**Question Number : 67 Question Id : 6760332513 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

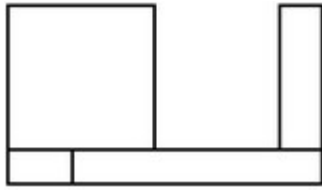
The 3D figure shows the view of an object. Identify the correct view looking in the direction of arrow, from the answer figures



Options :

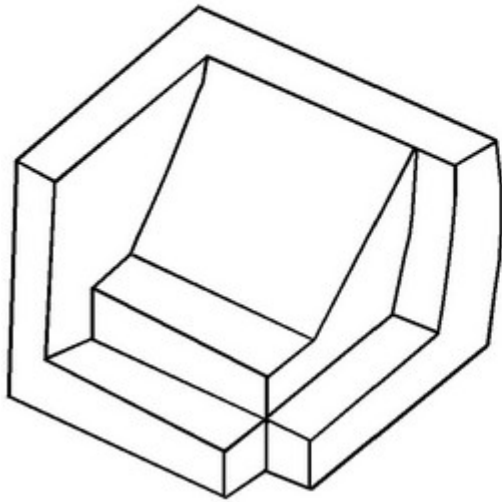


6760337808.



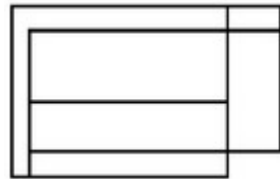
**Question Number : 68 Question Id : 6760332514 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

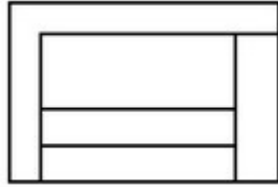
The 3D figure shows the view of an object. Identify the correct top view, from the answer figures.



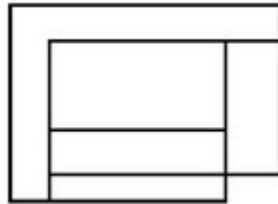
**Options :**

6760337809.

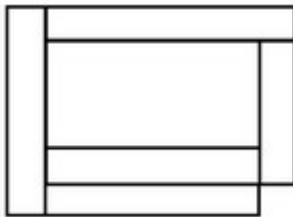




6760337810.



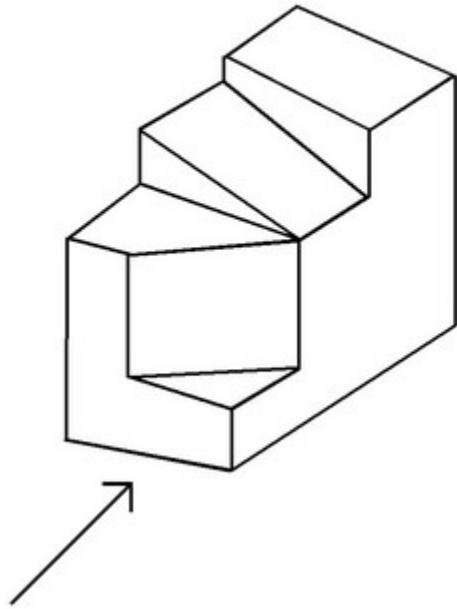
6760337811.



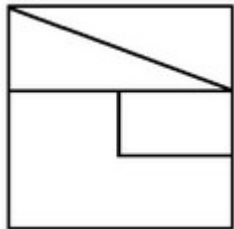
6760337812.

**Question Number : 69 Question Id : 6760332515 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

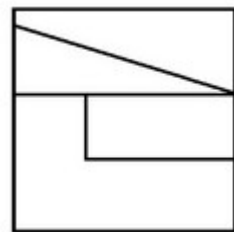
The 3D figure shows the view of an object. Identify the correct view looking in the direction of arrow, from the answer figures.



Options :

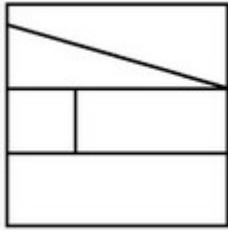


6760337813.

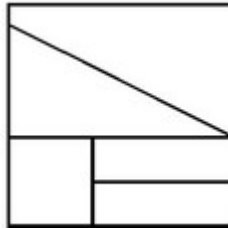


6760337814.

6760337815.

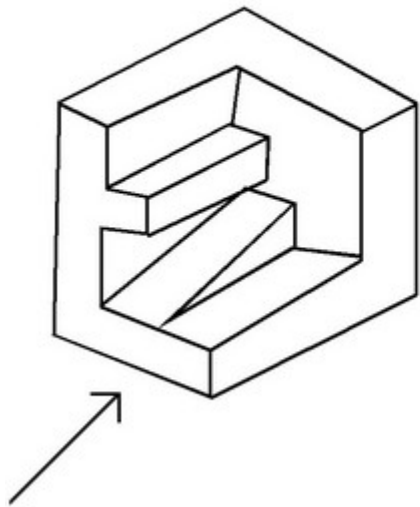


6760337816.

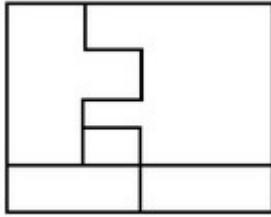


**Question Number : 70 Question Id : 6760332516 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

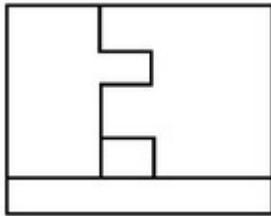
The 3D figure shows the view of an object. Identify the correct view looking in the direction of arrow, from the answer figures.



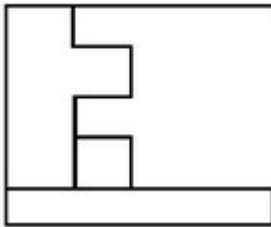
**Options :**



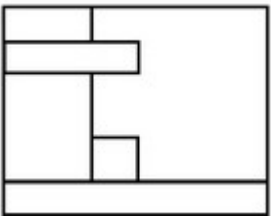
6760337817.



6760337818.



6760337819.

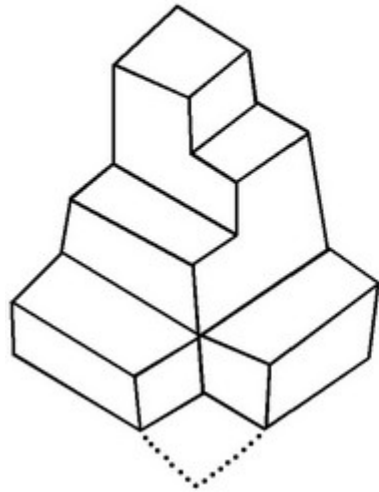


6760337820.

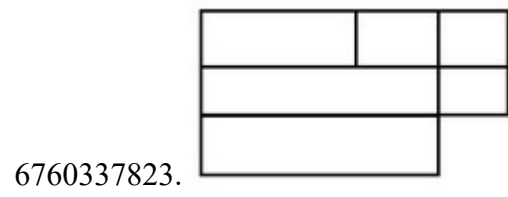
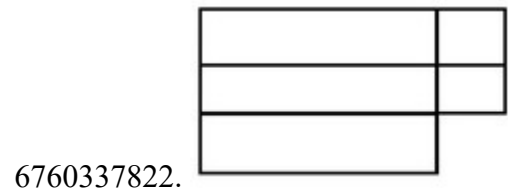
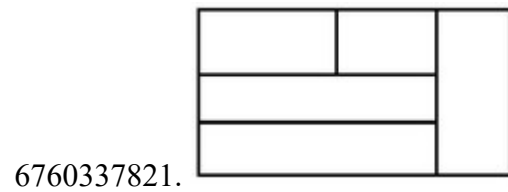
**Question Number : 71 Question Id : 6760332517 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

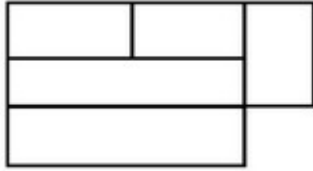


The 3D figure shows the view of an object. Identify the correct top view, from the answer figures.



Options :



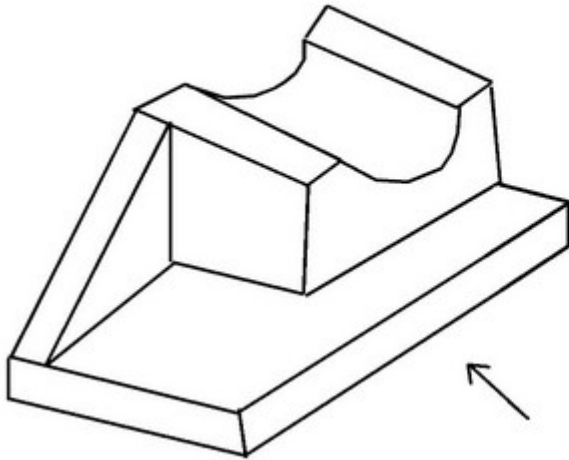


6760337824.

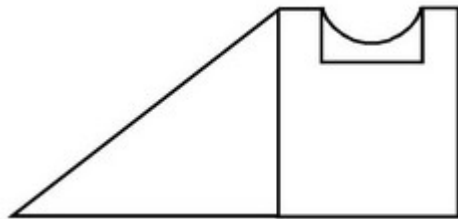
**Question Number : 72 Question Id : 6760332518 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The 3D figure shows the view of an object. Identify the correct view looking in the direction of arrow, from the answer figures.

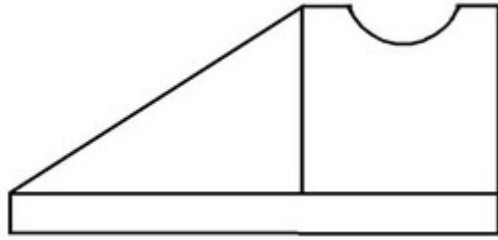


**Options :**

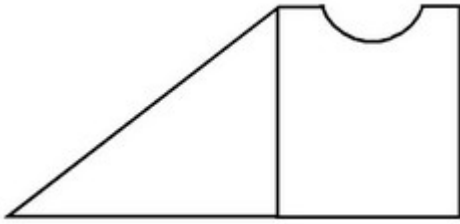


6760337825.

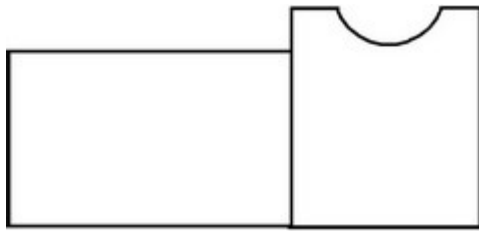
6760337826.



6760337827.

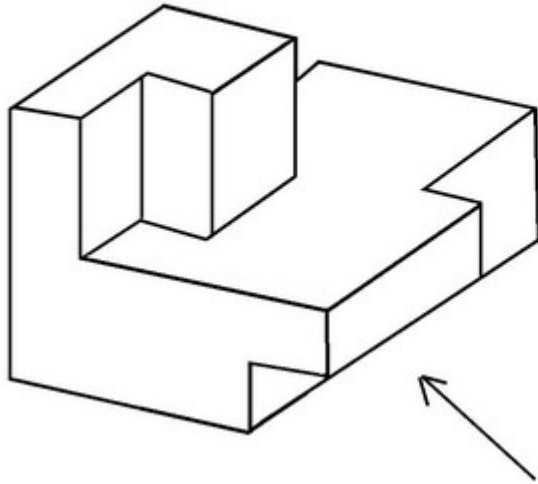


6760337828.

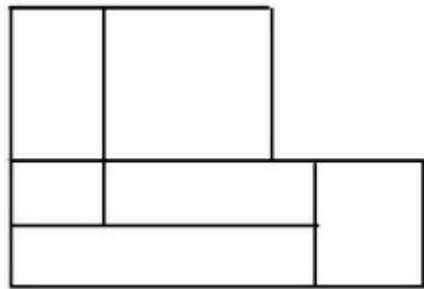


**Question Number : 73 Question Id : 6760332519 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

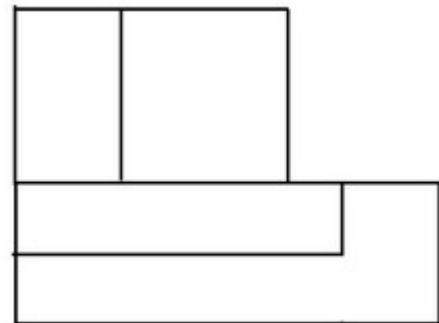
The 3D figure shows the view of an object. Identify the correct view looking in the direction of arrow, from the answer figures.



Options :



6760337829.



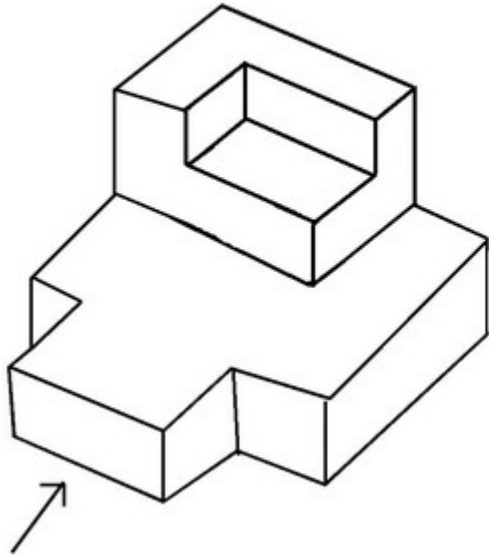
6760337830.

6760337831.

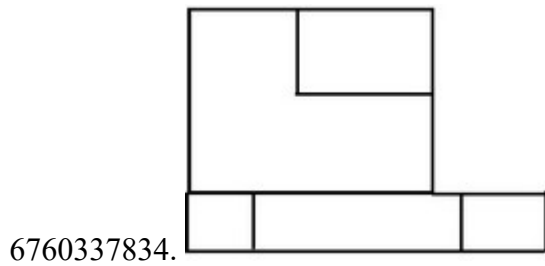
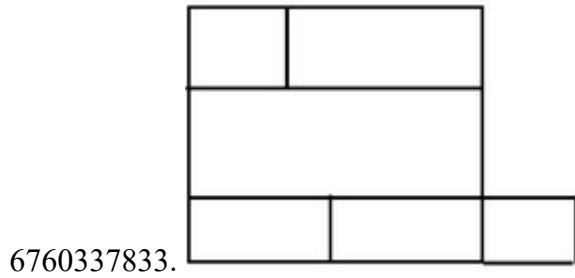

6760337832.

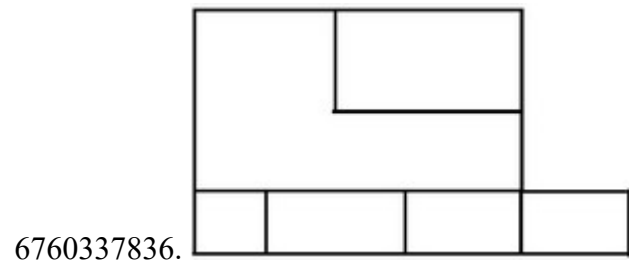
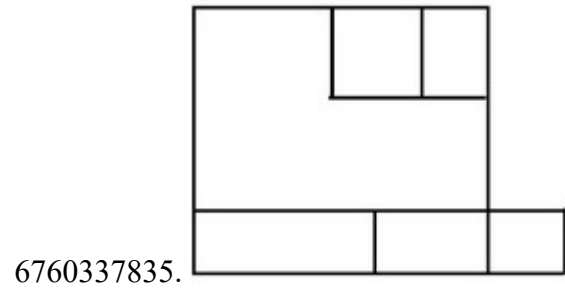

**Question Number : 74 Question Id : 6760332520 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

The 3D-figure shows the view of an object. Identify the correct view looking in the direction of arrow, from the answer figures.



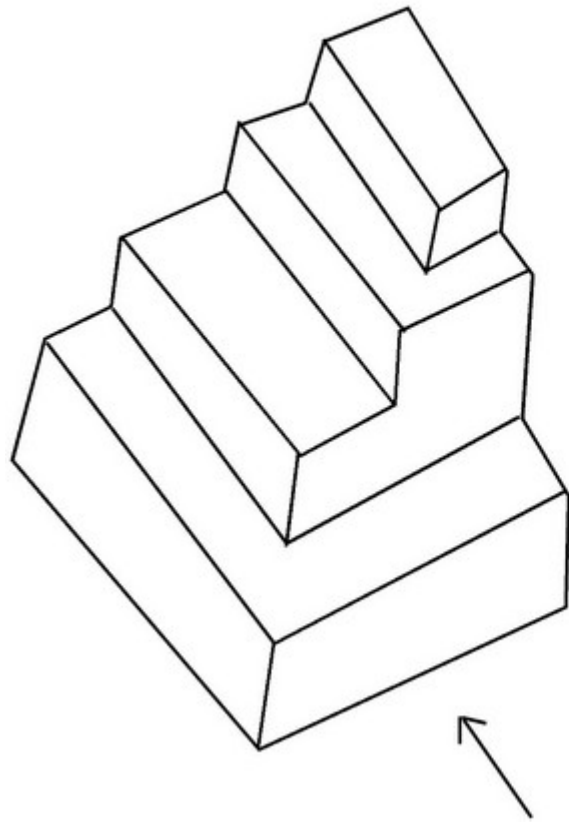
Options :



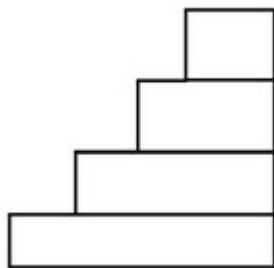


**Question Number : 75 Question Id : 6760332521 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

The 3D figure shows the view of an object. Identify the correct view looking in the direction of arrow, from the answer figures.

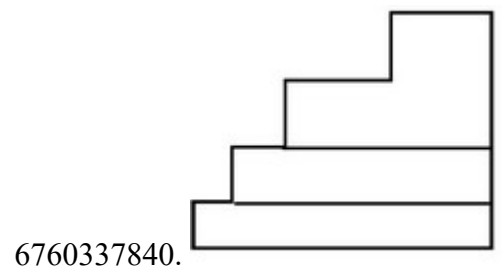
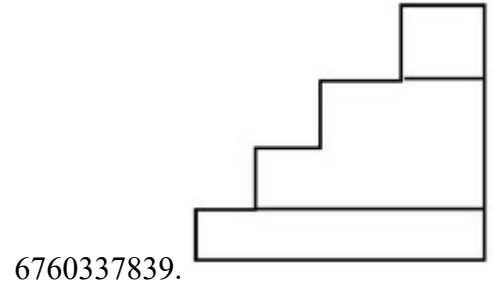
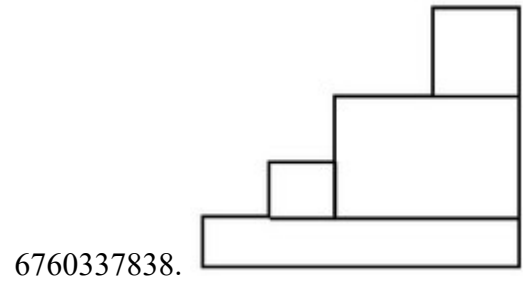


Options :



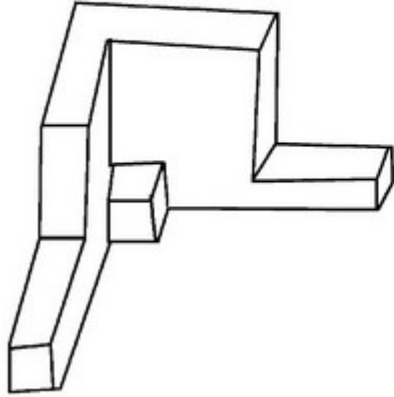
6760337837.



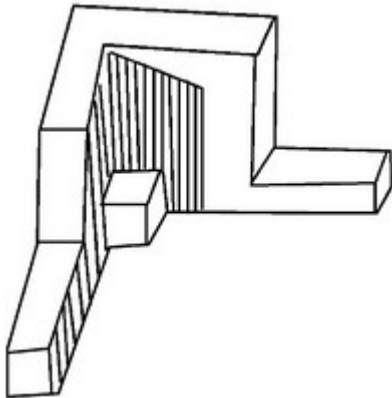


**Question Number : 76 Question Id : 6760332522 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

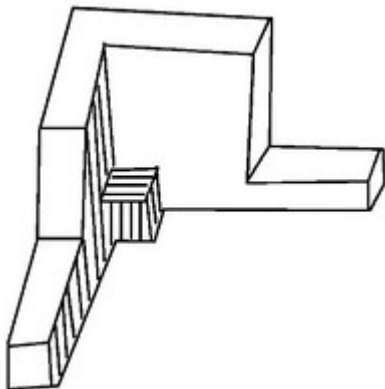
Identify the correct shadow from the following answer figures, assuming the position of the sun as shown.



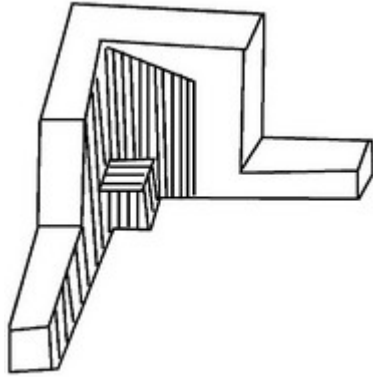
Options :



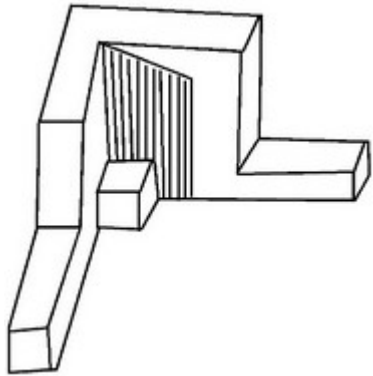
6760337841.



6760337842.



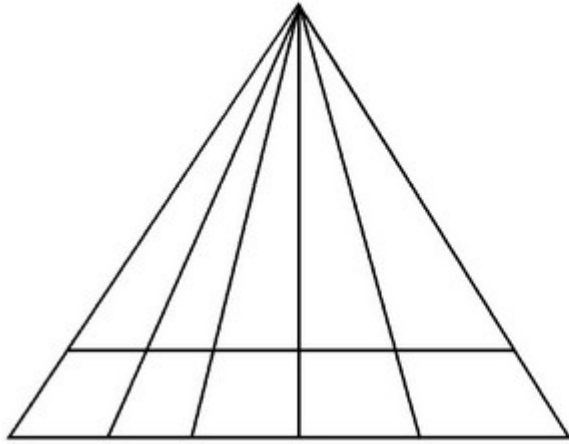
6760337843.



6760337844.

**Question Number : 77 Question Id : 6760332523 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

In the following figure, the number of triangles are -



**Options :**

6760337845. 11

6760337846. 15

6760337847. 30

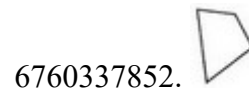
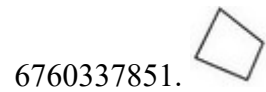
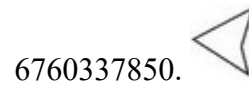
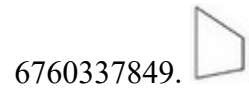
6760337848. 24

**Question Number : 78 Question Id : 6760332524 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

One of the following answer figures is hidden in the problem figure in same size and direction. Select correct one.



Options :

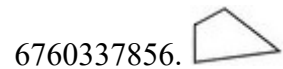
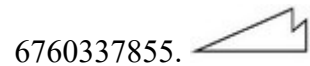
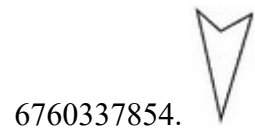
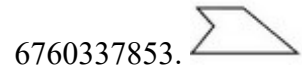


**Question Number : 79 Question Id : 6760332525 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

One of the following figures is hidden in the problem figure in same size and direction. Select the correct one.



Options :



Question Number : 80 Question Id : 6760332526 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No  
Correct Marks : 4 Wrong Marks : 1

Who designed and planned the modern day city of Bhubaneshwar ?

Options :

6760337857. Alvar Aalto

6760337858. Le-Corbusier

6760337859. Doxiadias

6760337860. Otto Koeings Berger

## Planning

Section Id :	676033159
Section Number :	4
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Sub-Section Number :	1
Sub-Section Id :	676033159
Question Shuffling Allowed :	Yes

Question Number : 81 Question Id : 6760332527 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No  
Correct Marks : 4 Wrong Marks : 1

Match List-I with List-II

List-I	List-II
A Prehistoric	I 600 BC – 1800 AD
B Medieval Period	II 1526 AD – 1800 AD
C Mughal Period	III 1800 AD – 1947 AD
D British Period	IV 2350 BC – 1800 BC

Options :

6760337861. A-I, B-II, C-III, D-IV

6760337862. A-II, B-III, C-I, D-IV

6760337863. A-IV, B-II, C-I, D-III

6760337864. A-IV, B-I, C-II, D-III

**Question Number : 82 Question Id : 6760332528 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

According to census of India 2011, the percentage of urban population in India is

**Options :**

6760337865. 40.2

6760337866. 25.5

6760337867. 31.1

6760337868. 38.5

**Question Number : 83 Question Id : 6760332529 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Who is the father of Green Revolution in India.

Choose the correct answer.

**Options :**

6760337869. Dr. Verghese Kurien

6760337870. Dr. M. S. Swaminathan



6760337871. Dr. Hiralal Chandhari

6760337872. Dr. Arun Krishan

**Question Number : 84 Question Id : 6760332530 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Which city in India was declared as world heritage site in 2019 by UNESCO

**Options :**

6760337873. Ajmer

6760337874. Agra

6760337875. Jaipur

6760337876. Auroville

**Question Number : 85 Question Id : 6760332531 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

- (A) India
- (B) Bangladesh
- (C) South Korea
- (D) China
- (E) Singapore

Rank these countries with respect to their GDP (2019) per capita, from higher to lower

**Options :**

6760337877. E → C → D → A → B

6760337878. E → D → C → A → B

6760337879. C → E → A → D → B

6760337880. E → D → A → C → B

**Question Number : 86 Question Id : 6760332532 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Which one of the following International Organisations adopted a resolution on COVID-19 titled 'Global solidarity to fight Corona Virus disease 2019 (COVID-19) ?

**Options :**

6760337881. United Nations General Assembly

6760337882. UNICEF

6760337883. World Health Organisation (WHO)

6760337884. UNESCO

**Question Number : 87 Question Id : 6760332533 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Choose the correct arrangement of Major rivers of India with their basin area in descending order

**Options :**

6760337885. Krishna, Indus, Godavari, Ganga

6760337886. Ganga, Krishna, Indus, Godavari

6760337887. Ganga, Indus, Godavari, Krishna

6760337888. Indus, Ganga, Godavari, Krishna

**Question Number : 88 Question Id : 6760332534 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

In which year the first section of the underground railway in the world was opened ?

**Options :**

6760337889. 1890

6760337890. 1863

6760337891. 1834

6760337892. 1815

**Question Number : 89 Question Id : 6760332535 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Planning commission was set up in

**Options :**

6760337893. 1948

6760337894. 1950

6760337895. 1952

6760337896. 1954

**Question Number : 90 Question Id : 6760332536 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

A typical Self Help Group (SHG) comprises of

**Options :**

6760337897. 5–10 members

6760337898. 10–25 members

6760337899. 30–50 members

6760337900. 50–100 members

**Question Number : 91 Question Id : 6760332537 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement-I : The services sector in India is the largest contribution to India's GDP.

Statement-II : The services sector in India also employs the largest work force.

In the light of the above statements, choose the correct answer from the options given below :

**Options :**

6760337901. Both Statement-I and Statement-II are true
6760337902. Both Statement-I and Statement-II are false
6760337903. Statement-I is correct but Statement-II is false
6760337904. Statement-I is incorrect but Statement-II is true

**Question Number : 92 Question Id : 6760332538 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No  
Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement-I : Life expectancy at birth of females is higher than that of males in India

Statement-II : One of the main reasons for this is the better nutritional care provided to female child in India

In the light of the above statements, choose the most appropriate answer from the options given below

**Options :**

6760337905. Both Statement-I and Statement-II are correct
6760337906. Both Statement-I and Statement-II are incorrect
6760337907. Statement-I is correct but Statement-II is incorrect
6760337908. Statement-I is incorrect but Statement-II is correct

**Question Number : 93 Question Id : 6760332539 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these dimension is considered in the computation of Human Development Index ?

**Options :**

6760337909. health indicators

6760337910. human resource indicators

6760337911. human rights indicators

6760337912. access to shelter

**Question Number : 94 Question Id : 6760332540 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following is the main cause of land degradation in Punjab ?

**Options :**

6760337913. Crop residue burning

6760337914. Intensive cultivation

6760337915. Over grazing

6760337916. Over-irrigation

**Question Number : 95 Question Id : 6760332541 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The percentage of urban poor for a city having 27 wards is given in the table below

Percentage of Urban Poor	No. of wards
15-25	6
25-35	10
35-45	7
45-55	4

The mean percentage of urban poor living in the city is :

Options :

6760337917. 27

6760337918. 33.3

6760337919. 35

6760337920. 35.5

Question Number : 96 Question Id : 6760332542 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

A city has 4 wards. The area and the population of each ward is given in the table below :

Ward No.	Area (in Hectares)	Population
1	200	30,000
2	100	15,000
3	150	25,000
4	200	10,000

Which of the following holds true for the above table ?

Options :

6760337921. Ward 1 has the highest population density

6760337922. Ward 1 and Ward 2 have the same population density

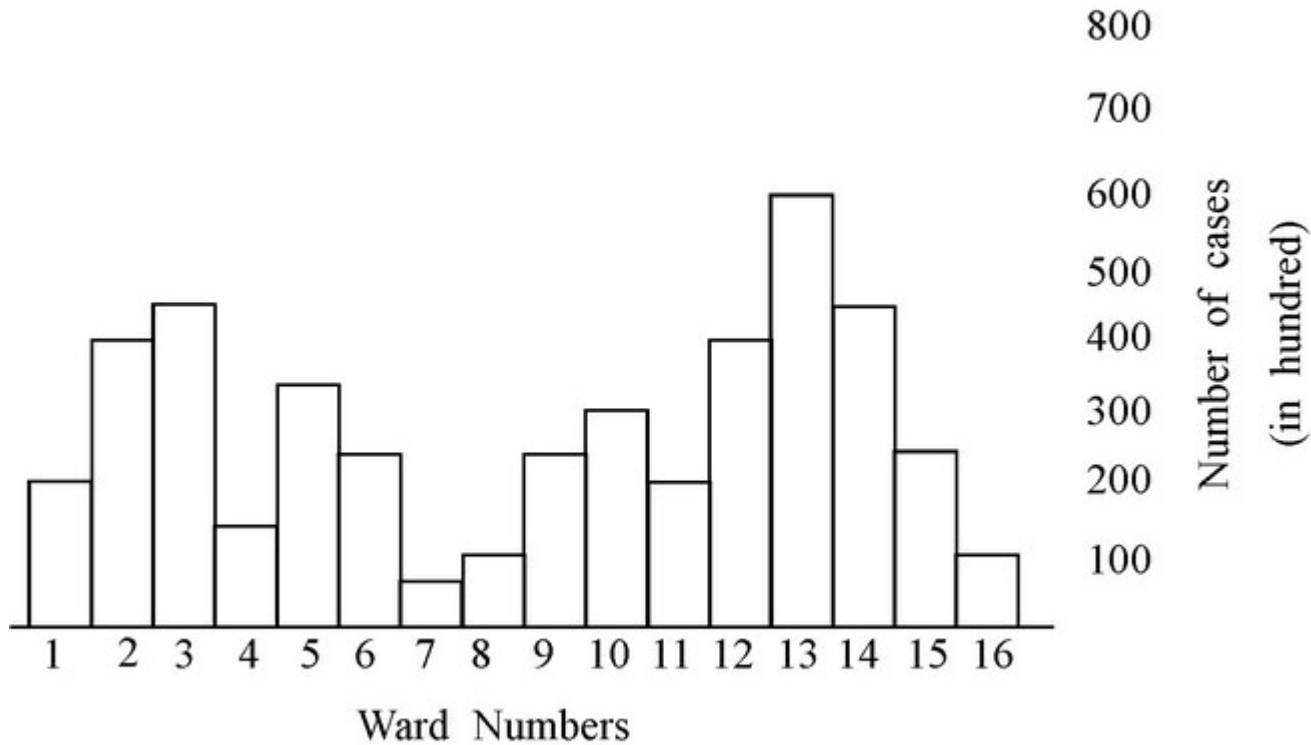
6760337923. The population density of ward 4 is thrice that of ward 3.

6760337924. Ward 2 has the lowest population density

Question Number : 97 Question Id : 6760332543 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No  
Correct Marks : 4 Wrong Marks : 1



The following bar graph shows the number of COVID cases in sixteen different wards of a city



Select the INCORRECT statement

Options :

6760337925. Six wards have covid cases  $\leq 200$  and five wards have  $\geq 400$  cases

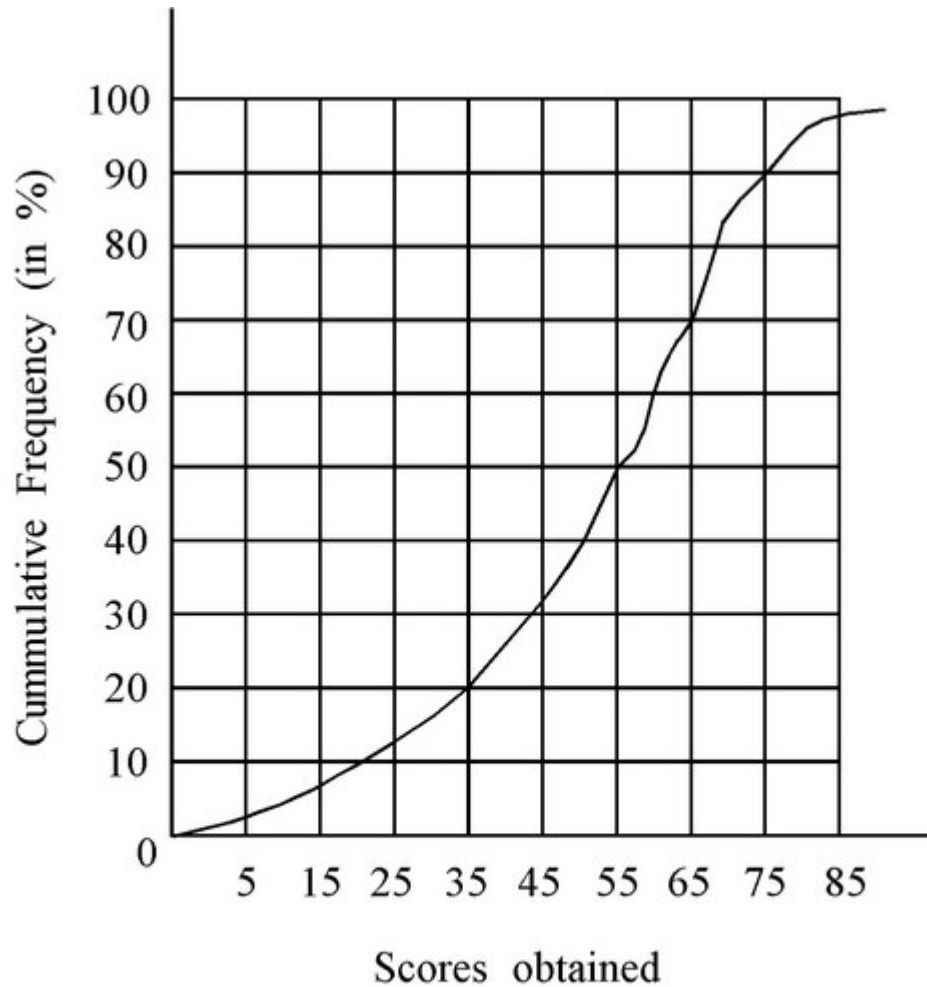
6760337926. Two wards have more than 400 cases and one ward has less than hundred cases

6760337927. Seven wards have more than or equal to three hundred cases and ten wards have less than or equal to three hundred cases

Five wards have more than or equal to four hundred cases and three wards have less than hundred or equal to hundred cases.

6760337928.

Question Number : 98 Question Id : 6760332544 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

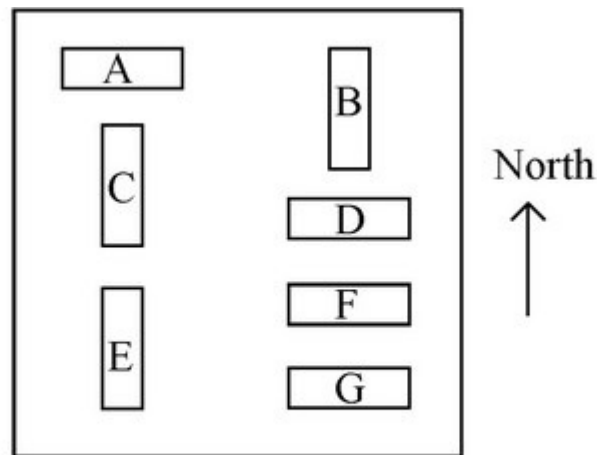


The graph represents scores obtained by students in a class. Identify the correct statement related to the above graph

**Options :**

6760337929. 90% of the students scored 75.
6760337930. more than 90% of the students scored 75.
6760337931. 90% of the students scored 75 or below.
6760337932. 90% of the students scored more than 75.

**Question Number : 99 Question Id : 6760332545 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**



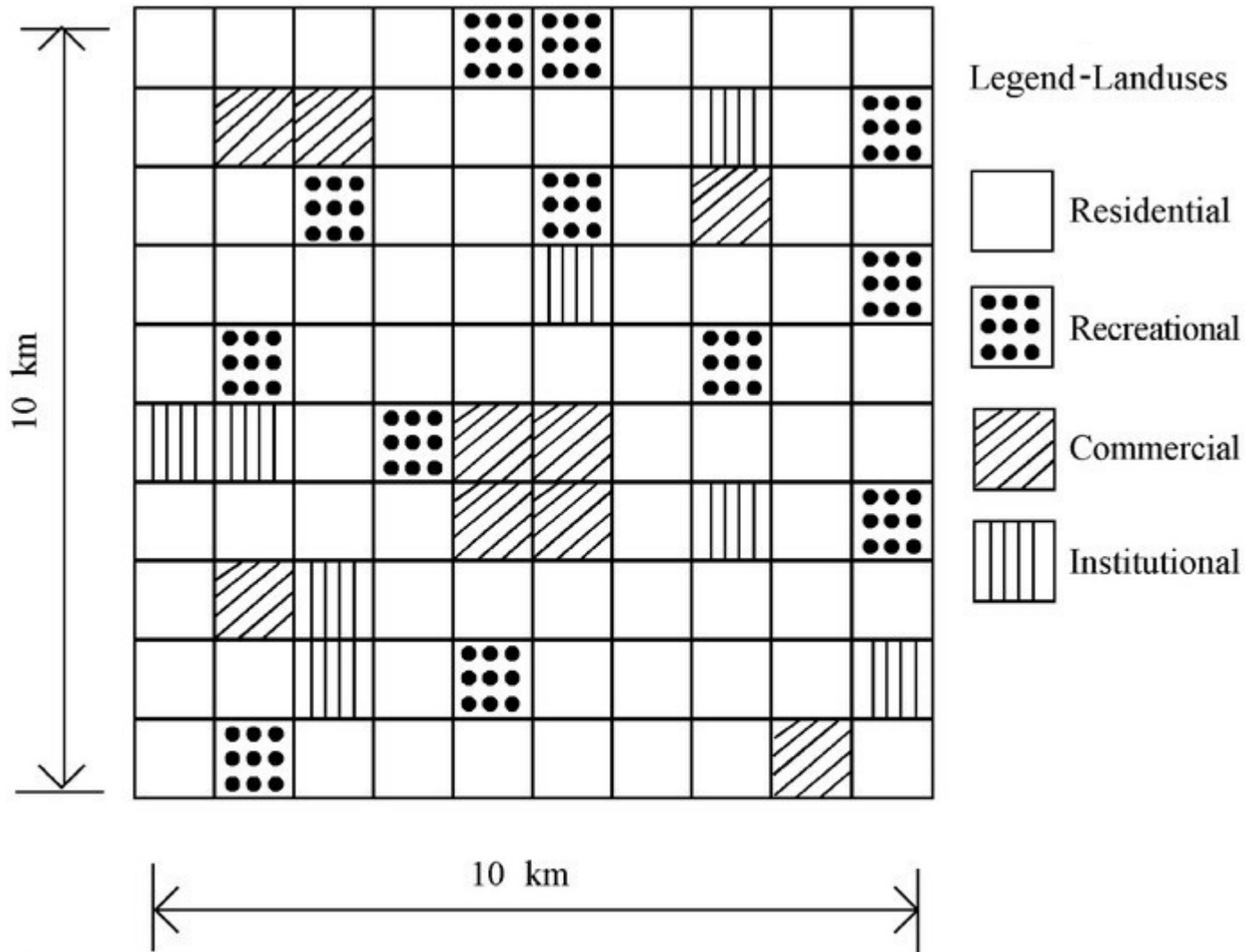
Choose the correct statement with reference to the layout shown above

**Options :**

6760337933. Block B is north of block G and block E is east of block F.
6760337934. Block G is south of block B and block C is west of block D.
6760337935. Block D is west of block C and block F is south of block D.

6760337936. Block D is west of block E and block G is south of block F.

**Question Number : 100 Question Id : 6760332546 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No  
Correct Marks : 4 Wrong Marks : 1**



The diagram above represents the various land-uses in a city. All the grids are square in shape and equal in size. The share of “recreational” land use in the city is :

Options :

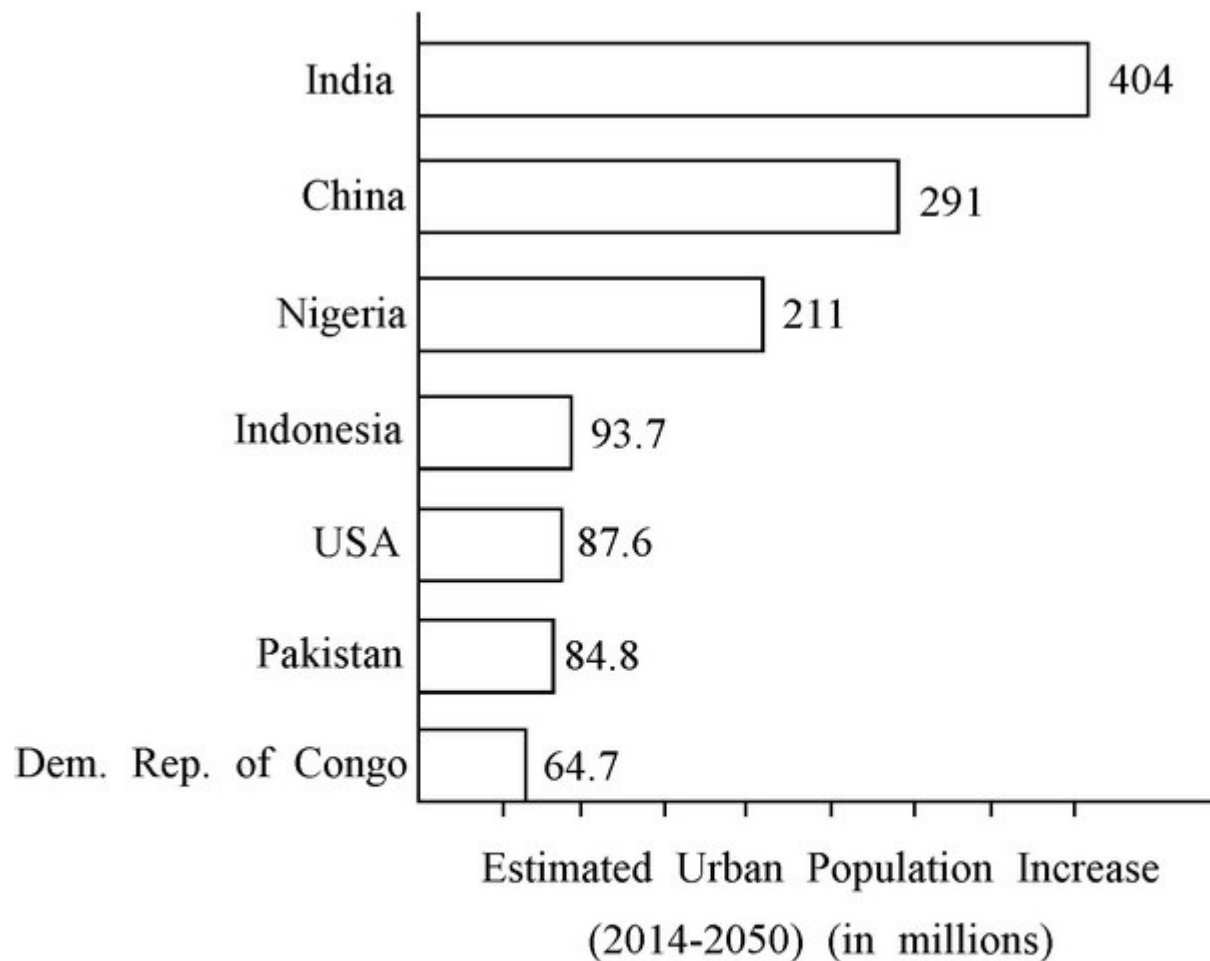
6760337937. 10%

6760337938. 10 km

6760337939. 12%

6760337940. 12 km

**Question Number : 101 Question Id : 6760332547 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No  
Correct Marks : 4 Wrong Marks : 1**



The global population increase between 2014 and 2050 is forecasted to be 2.5 billion. The above graph represents countries contributing the most to urban population growth during this period. From the above graph it can be concluded that by 2050 :

**Options :**

6760337941. The total number of people living in Indian cities will be 404 million.

6760337942. India will have the highest urban population in the world.

6760337943. The percentage share of people living in the urban areas of India with respect to the globe will be approximately 16%

6760337944. The number of additional urban population in India will be 404 million

**Question Number : 102 Question Id : 6760332548 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Cities are home to nearly half of the world's population, and over the next 30 years, most of the two-billion person increase in global population is expected to occur in cities and towns in poor countries. In many countries, in the developing world, at least one in four urban residents is already estimated to be living in absolute poverty, and the manifestations of urban poverty are clearly visible : overcrowded neighbourhoods, high rates of crime, inadequate housing, and insufficient access to clean water, adequate sanitation and other social services. Effective governance will be required to manage urban transformation. If current level of service delivery is any indication, huge capital investments are likely to be required in small cities and towns in the developing world over the next 30 years.

As per the above passage, the urban poor in many countries in the developing world constitute :

**Options :**

6760337945. four percent of the urban population

6760337946. one-fourth of the country's population

6760337947. twenty-five percent of the urban population



6760337948. half of the world's population

**Question Number : 103 Question Id : 6760332549 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Cities are home to nearly half of the world's population, and over the next 30 years, most of the two-billion person increase in global population is expected to occur in cities and towns in poor countries. In many countries, in the developing world, at least one in four urban residents is already estimated to be living in absolute poverty, and the manifestations of urban poverty are clearly visible : overcrowded neighbourhoods, high rates of crime, inadequate housing, and insufficient access to clean water, adequate sanitation and other social services. Effective governance will be required to manage urban transformation. If current level of service delivery is any indication, huge capital investments are likely to be required in small cities and towns in the developing world over the next 30 years

As per the author, some of the characteristics present in parts of urban areas, that are reflexive of urban poverty are :

**Options :**

6760337949. poor urban governance

6760337950. less infrastructure investment

6760337951. urban transformation

6760337952. high rates of crimes and inadequate housing

**Question Number : 104 Question Id : 6760332550 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

**Assertion A :** The government intends to encourage inter-disciplinary research. However, only 10% of the total inter-disciplinary projects received funding last year.

**Reason R :** Funding is still allocated according to the old categories and there are very little funds for research in overlapping difficult subjects.

In the light of the above statement, choose the most appropriate answer from the options given below

**Options :**

6760337953. Both A and R are correct and R is the correct explanation of A

6760337954. Both A and R are correct but R is not the correct explanation of A

6760337955. A is correct but R is not correct

6760337956. A is not correct but R is correct

**Question Number : 105 Question Id : 6760332551 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

(A) Sometimes struggle against injustice can take path of violence

(B) People who feel marginalised have to fight for justice

(C) This can be done through democratic path in a constitutional manner

(D) However, democracy still remains the best way to fight for recognition and accommodate diversity

Arrange the above in the correct logical sequence

**Options :**

6760337957.  $A \rightarrow B \rightarrow C \rightarrow D$

6760337958.  $B \rightarrow C \rightarrow A \rightarrow D$

6760337959.  $D \rightarrow B \rightarrow C \rightarrow A$

6760337960.  $B \rightarrow A \rightarrow C \rightarrow D$

## Drawing

<b>Section Id :</b>	676033160
<b>Section Number :</b>	5
<b>Section type :</b>	Offline
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	2
<b>Number of Questions to be attempted :</b>	2
<b>Section Marks :</b>	100
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	676033160
<b>Question Shuffling Allowed :</b>	No

**Question Number : 106 Question Id : 6760332552 Question Type : SUBJECTIVE**

**Correct Marks : 50**

Draw proportionate sketch of given reference image in the space provided for the answer of this question. Students can use any black and white rendering techniques of their choice.

**OR**

Decode the given image and prepare aesthetically balanced composition in frame of your choice. Students can use any black and white rendering techniques of their choice.



**Question Number : 107 Question Id : 6760332553 Question Type : SUBJECTIVE  
Correct Marks : 50**

Use open air theatre, people, musical instruments, river or lake, cafe and create a picture of your choice.

**OR**

Draw a composition using cool colours. Students can use only triangles and circles to create composition within frame of their own choice.