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**Question Paper Name :** B ARCH EM 23rd Feb 2021 Shift 2  
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**Number of Questions :** 82  
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## **B ARCH EM**

**Group Number :** 1  
**Group Id :** 708191127  
**Group Maximum Duration :** 0  
**Group Minimum Duration :** 180  
**Show Attended Group? :** No  
**Edit Attended Group? :** No  
**Break time :** 0  
**Group Marks :** 400  
**Is this Group for Examiner? :** No

## **Mathematics Section A**

**Section Id :** 708191397  
**Section Number :** 1  
**Section type :** 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
<b>Mark As Answered Required? :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	708191677
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 1 Question Id : 7081911660 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

The value of the integral  $\int_{-4}^4 |9-x^2| dx$  is :

**Options :**

70819137861.  $\frac{121}{3}$

70819137862.  $\frac{122}{3}$

70819137863.  $\frac{125}{3}$

70819137864.  $\frac{128}{3}$

**Question Number : 1 Question Id : 7081911660 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

$\int_{-4}^4 |9-x^2| dx$  या पूर्णांकी (integral) चे मूल्य \_\_\_\_\_ आहे.

**Options :**

70819137861.  $\frac{121}{3}$

70819137862.  $\frac{122}{3}$

70819137863.  $\frac{125}{3}$

70819137864.  $\frac{128}{3}$

**Question Number : 2 Question Id : 70819111661 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

The sum of infinite number of terms of a Geometric Progression is 3 and the sum of the squares of its terms is  $\frac{9}{2}$ . The sum of the cubes of its terms is :

**Options :**

70819137865.  $\frac{31}{13}$

70819137866.  $\frac{108}{13}$

70819137867.  $\frac{27}{2}$

70819137868.  $\frac{54}{7}$

**Question Number : 2 Question Id : 70819111661 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

भूमिती श्रेढी (Geometric Progression) च्या अनंत पदांची (infinite number of terms) बेरीज 3 आहे. आणि त्याच्या पदांच्या वर्गाची बेरीज  $\frac{9}{2}$  आहे. तर त्याच्या पदांच्या घाता (cubes) ची बेरीज \_\_\_\_\_ आहे.

**Options :**

70819137865.  $\frac{31}{13}$

70819137866.  $\frac{108}{13}$

70819137867.  $\frac{27}{2}$

70819137868.  $\frac{54}{7}$

**Question Number : 3 Question Id : 70819111662 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

Which of the following Boolean expression is a tautology ?

**Options :**

70819137869.  $P \Leftrightarrow P \vee q$

70819137870.  $(P \wedge q) \Leftrightarrow P$

70819137871.  $(P \wedge (\sim P \vee q)) \vee (\sim q)$

70819137872.  $(p \vee \sim p) \wedge (q \vee (\sim q))$

**Question Number : 3 Question Id : 70819111662 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

खाली दिलेल्या बूलीय पदावली (Boolean expression) मध्ये कोणती पदावली अनुलाप (tautology) आहे ?

**Options :**

70819137869.  $P \Leftrightarrow P \vee q$

70819137870.  $(P \wedge q) \Leftrightarrow P$

70819137871.  $(P \wedge (\sim P \vee q)) \vee (\sim q)$

70819137872.  $(P \vee \sim P) \wedge (q \vee (\sim q))$

**Question Number : 4 Question Id : 70819111663 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

Let  $|a| < 1, |b| < 1, |c| < 1$  and  $x = \sum_{n=0}^{\infty} a^n, y = \sum_{n=0}^{\infty} b^n, z = \sum_{n=0}^{\infty} c^n$ . If  $\frac{1}{x}, \frac{1}{y}, \frac{1}{z}$  are in Arithmetic

Progression, then :

**Options :**

70819137873. a, b and c are in Arithmetic Progression

70819137874. a, b and c are in Geometric Progression

70819137875. a, 2b and c are in Arithmetic Progression

70819137876. a, b and c satisfy  $2b^2=ac$

**Question Number : 4 Question Id : 70819111663 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

समजा  $|a|<1, |b|<1, |c|<1$  आणि  $x = \sum_{n=0}^{\infty} a^n, y = \sum_{n=0}^{\infty} b^n, z = \sum_{n=0}^{\infty} c^n$  जर  $\frac{1}{x}, \frac{1}{y}, \frac{1}{z}$  हे गणित श्रेढी (A.P.)

मध्ये आहेत, तर :

**Options :**

70819137873. a, b आणि c हे गणित श्रेढी मध्ये आहेत.

70819137874. a, b आणि c हे भूमिती श्रेढी (G.P.) मध्ये आहेत.

70819137875. a, 2b आणि c हे गणित श्रेढी मध्ये आहेत.

70819137876. a, b आणि c हे  $2b^2=ac$  ची पूर्ती करतात

**Question Number : 5 Question Id : 70819111664 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

$\sum_{n=1}^{\infty} \frac{2n^2 + 7n + 5}{n!}$  is equal to :

**Options :**

70819137877.  $15e + 5$

70819137878.  $15e - 5$

70819137879.  $16e - 5$

70819137880.  $16e - 7$

**Question Number : 5 Question Id : 70819111664 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

$\sum_{n=1}^{\infty} \frac{2n^2 + 7n + 5}{n!}$  बरोबर \_\_\_\_\_ आहे.

**Options :**

70819137877.  $15e + 5$

70819137878.  $15e - 5$

70819137879.  $16e - 5$

70819137880.  $16e - 7$

**Question Number : 6 Question Id : 70819111665 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

The least positive integral value of  $\lambda$  such that  $10^{50} + (3 \times (4)^{52}) + \lambda$  is divisible by 9 is :

**Options :**

70819137881. 5

70819137882. 3

70819137883. 7

70819137884. 1

**Question Number : 6 Question Id : 70819111665 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

$\lambda$  चे लघुत्तम धन पूर्णांकी मूल्य (least positive integral value) जसे की  $10^{50} + (3 \times (4)^{52}) + \lambda$  हे 9 ने विभाज्य (divisible) आहे, \_\_\_\_\_ आहे.

**Options :**

70819137881. 5

70819137882. 3

70819137883. 7

70819137884. 1

**Question Number : 7 Question Id : 70819111666 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

There are 4, 5 and 6 points on the three parallel and co-planar lines. If no set of four or more points is cyclic and no set of three points lying on distinct lines is collinear, then the number of circles passing through exactly three points is :

**Options :**

70819137885. 455

70819137886. 421

70819137887. 435

70819137888. 441



**Question Number : 7 Question Id : 70819111666 Question Type : MCQ Option Shuffling : Yes Is**

**Question Mandatory : No**

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

तेथे 4, 5 आणि 6 बिंदू हे एक प्रतलीय (co-planar) असणाऱ्या तीन समांतर रेषांवर आहेत. जर चार किंवा त्या पेक्षा जास्त बिंदू चा संच चक्रीय (cyclic) नाही, आणि भिन्न (distinct) रेषेवर असणाऱ्या 3 बिंदूंचा संच एकरेषीय (collinear) नाही, तर अचूक (exactly) तीन बिंदू मधून जाणाऱ्या वर्तुळांची संख्या \_\_\_\_\_ आहे.

**Options :**

70819137885. 455

70819137886. 421

70819137887. 435

70819137888. 441

**Question Number : 8 Question Id : 70819111667 Question Type : MCQ Option Shuffling : Yes Is**

**Question Mandatory : No**

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

If  $y = \frac{ax - b}{(x - 1)(x - 4)}$  has an extremum at the point (2, -1), then the values of a and b are :

**Options :**

70819137889. a = 1, b = 0

70819137890. a = 0, b = 1

70819137891. a = 0, b = -1

70819137892. a = -1, b = 1

Question Number : 8 Question Id : 70819111667 Question Type : MCQ Option Shuffling : Yes Is

Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

जर  $y = \frac{ax - b}{(x - 1)(x - 4)}$  हे  $(2, -1)$  या बिंदूत कमाल किंवा किमान (extremum) आहे, तर a आणि b ची मूल्ये \_\_\_\_\_ आहेत.

Options :

70819137889.  $a = 1, b = 0$

70819137890.  $a = 0, b = 1$

70819137891.  $a = 0, b = -1$

70819137892.  $a = -1, b = 1$

Question Number : 9 Question Id : 70819111668 Question Type : MCQ Option Shuffling : Yes Is

Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The distance between the planes  $\vec{r} \cdot (2\hat{i} + \hat{j} - 2\hat{k}) + 5 = 0$  and  $\vec{r} \cdot (6\hat{i} + 3\hat{j} - 6\hat{k}) + 2 = 0$  is :

Options :

70819137893.  $\frac{9}{13}$

70819137894.  $\frac{15}{4}$

70819137895.  $\frac{13}{9}$

70819137896.  $\frac{1}{13}$

**Question Number : 9 Question Id : 70819111668 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

$\vec{r} \cdot (2\hat{i} + \hat{j} - 2\hat{k}) + 5 = 0$  आणि  $\vec{r} \cdot (6\hat{i} + 3\hat{j} - 6\hat{k}) + 2 = 0$  या प्रतलांमधील अंतर (distance) \_\_\_\_\_ आहे.

**Options :**

70819137893.  $\frac{9}{13}$

70819137894.  $\frac{15}{4}$

70819137895.  $\frac{13}{9}$

70819137896.  $\frac{1}{13}$

**Question Number : 10 Question Id : 70819111669 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

The probability of solving a problem in Mathematics by two students X and Y are  $\frac{1}{4}$  and  $\frac{1}{5}$  respectively. If both of them try to solve the problem independently, then the probability that the problem will be solved by exactly one of them is equal to :

**Options :**

70819137897.  $\frac{7}{20}$

70819137898.  $\frac{1}{20}$

70819137899.  $\frac{19}{20}$

70819137900.  $\frac{12}{20}$

**Question Number : 10 Question Id : 7081911669 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No**

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

X आणि Y या दोन विद्यार्थ्यांची गणितामधील एक प्रश्न (problem) सोडविण्यासाठी ची संभाव्यता अनुक्रमे  $\frac{1}{4}$

आणि  $\frac{1}{5}$  आहे. जर दोघांनी स्वतंत्रपणे प्रश्न सोडविण्याचा प्रयत्न केला तर त्यांच्या पैकी एकानेच अचूक प्रश्न सोडविण्याची संभाव्यता \_\_\_\_\_ आहे.

**Options :**

70819137897.  $\frac{7}{20}$

70819137898.  $\frac{1}{20}$

70819137899.  $\frac{19}{20}$

70819137900.  $\frac{12}{20}$

**Question Number : 11 Question Id : 7081911670 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

The polar form of the complex number  $\frac{1+i}{1-i}$  is equal to :

**Options :**

70819137901.  $\cos \frac{\pi}{2} + i \sin \frac{\pi}{2}$

70819137902.  $\cos \frac{\pi}{2} - i \sin \frac{\pi}{2}$

70819137903.  $\cos \frac{\pi}{4} + i \sin \frac{\pi}{4}$

70819137904.  $\cos \frac{\pi}{4} - i \sin \frac{\pi}{4}$

**Question Number : 11 Question Id : 70819111670 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

$\frac{1+i}{1-i}$  या समिश्र संख्येचा (complex number) ध्रुवीय प्रकार (polar form) बरोबर \_\_\_\_\_ आहे.

**Options :**

70819137901.  $\cos \frac{\pi}{2} + i \sin \frac{\pi}{2}$

70819137902.  $\cos \frac{\pi}{2} - i \sin \frac{\pi}{2}$

70819137903.  $\cos \frac{\pi}{4} + i \sin \frac{\pi}{4}$

$$\cos \frac{\pi}{4} - i \sin \frac{\pi}{4}$$

70819137904.

**Question Number : 12 Question Id : 70819111671 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

If the equation of a line which divides the line segment joining the points (1, 0) and (3, 0) in the ratio 2 : 1 and is also perpendicular to it, is  $ax = 7$ , then the value of a is equal to :

**Options :**

70819137905. 2

70819137906. 3

70819137907. 4

70819137908. 1

**Question Number : 12 Question Id : 70819111671 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

जर एका रेषेचे समीकरण, जी (1, 0) आणि (3, 0) या बिंदूंना जोडणाऱ्या रेषाखंडाला (segment) 2 : 1 या गुणोत्तरात विभागते आणि शिवाय त्या रेषाखंडावर लंब आहे,  $ax = 7$  आहे, तर a चे मूल्य बरोबर \_\_\_\_\_ आहे.

**Options :**

70819137905. 2

70819137906. 3

70819137907. 4

70819137908. 1

**Question Number : 13 Question Id : 70819111672 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

Equation of the circle, which is the mirror image of the circle  $x^2 + y^2 - 2x = 0$  with respect to the line  $x + y = 2$ , is :

**Options :**

70819137909.  $x^2 + y^2 - 2x + 4y + 3 = 0$

70819137910.  $x^2 + y^2 - 4x - 2y + 4 = 0$

70819137911.  $2(x^2 + y^2) - x + y + 1 = 0$

70819137912.  $x^2 + y^2 - 2x - 4y + 3 = 0$

**Question Number : 13 Question Id : 70819111672 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

वर्तुळाचे समीकरण, जे वर्तुळ  $x + y = 2$  रेषेच्या सापेक्ष (with respect) असणाऱ्या  $x^2 + y^2 - 2x = 0$  या वर्तुळाची आरशातील प्रतिमा (mirror image) आहे, \_\_\_\_\_ आहे.

**Options :**

70819137909.  $x^2 + y^2 - 2x + 4y + 3 = 0$

70819137910.  $x^2 + y^2 - 4x - 2y + 4 = 0$

70819137911.  $2(x^2 + y^2) - x + y + 1 = 0$

70819137912.  $x^2 + y^2 - 2x - 4y + 3 = 0$

**Question Number : 14 Question Id : 70819111673 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No**

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

Equations of the common tangent of the ellipse  $\frac{(x+1)^2}{2^2} + \frac{(y-1)^2}{3^2} = 1$  and the circle  $(x+1)^2 + (y-1)^2 = 4$  are :

**Options :**

70819137913.  $y+3=0$  and  $x-1=0$

70819137914.  $x-3=0$  and  $y+1=0$

70819137915.  $x+3=0$  and  $x-1=0$

70819137916.  $y+3=0$  and  $y-1=0$

**Question Number : 14 Question Id : 70819111673 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No**

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

विवृत (ellipse)  $\frac{(x+1)^2}{2^2} + \frac{(y-1)^2}{3^2} = 1$  आणि वर्तुळ  $(x+1)^2 + (y-1)^2 = 4$  यांच्या सामाईक (common)

स्पर्शिकांची समीकरणे \_\_\_\_\_ आहेत.

**Options :**

70819137913.  $y+3=0$  and  $x-1=0$

70819137914.  $x-3=0$  and  $y+1=0$

70819137915.  $x+3=0$  and  $x-1=0$



70819137916.  $y+3=0$  and  $y-1=0$

Question Number : 15 Question Id : 70819111674 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

If  $A = \begin{bmatrix} 1 & a \\ 0 & 1 \end{bmatrix}$ , then  $A^k$  ( $k \in \mathbb{N}$ ) is :

Options :

70819137917.  $\begin{bmatrix} 1 & ka \\ 0 & 1 \end{bmatrix}$

70819137918.  $\begin{bmatrix} 1 & k^2a \\ 0 & 1 \end{bmatrix}$

70819137919.  $\begin{bmatrix} k & ka \\ 0 & k \end{bmatrix}$

70819137920.  $\begin{bmatrix} 1 & ka \\ 0 & 0 \end{bmatrix}$

Question Number : 15 Question Id : 70819111674 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

जर  $A = \begin{bmatrix} 1 & a \\ 0 & 1 \end{bmatrix}$ , तर  $A^k$  ( $k \in \mathbb{N}$ ) \_\_\_\_\_ आहे.

Options :

70819137917.

$$\begin{bmatrix} 1 & ka \\ 0 & 1 \end{bmatrix}$$

70819137918.  $\begin{bmatrix} 1 & k^2a \\ 0 & 1 \end{bmatrix}$

70819137919.  $\begin{bmatrix} k & ka \\ 0 & k \end{bmatrix}$

70819137920.  $\begin{bmatrix} 1 & ka \\ 0 & 0 \end{bmatrix}$

**Question Number : 16 Question Id : 70819111675 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No**

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

The values of  $s$  and  $t$ , for which the system of equations

$$x_1 + x_2 + x_3 = 5$$

$$x_1 + 2x_2 + 3x_3 = 9$$

$$x_1 + 3x_2 + sx_3 = t$$

has no solution, are :

**Options :**

70819137921.  $s=5, t=13$

70819137922.  $s \neq 5$

70819137923.  $s=5, t \neq 13$

70819137924.  $t \neq 13$

**Question Number : 16 Question Id : 70819111675 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

s आणि t ची मूल्ये, ज्या साठी

$$x_1 + x_2 + x_3 = 5$$

$$x_1 + 2x_2 + 3x_3 = 9$$

$x_1 + 3x_2 + sx_3 = t$  या समीकरणांच्या प्रणालीची उकल नाही, \_\_\_\_\_ आहेत.

**Options :**

70819137921.  $s=5, t=13$

70819137922.  $s \neq 5$

70819137923.  $s=5, t \neq 13$

70819137924.  $t \neq 13$

**Question Number : 17 Question Id : 70819111676 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

Derivative of  $\tan^{-1}\left(\frac{2x}{1-x^2}\right)$  with respect to  $\sin^{-1}\left(\frac{2x}{1+x^2}\right)$  in  $(1, \infty)$ , is :

**Options :**

70819137925. 1

70819137926. -1

70819137927. 0

70819137928. 2

Question Number : 17 Question Id : 70819111676 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

$\tan^{-1}\left(\frac{2x}{1-x^2}\right)$  फलाचे  $\sin^{-1}\left(\frac{2x}{1+x^2}\right)$  च्या सापेक्ष (with respect) विकलन (Derivative)  $(1, \infty)$  मध्ये \_\_\_\_\_ आहे.

Options :

70819137925. 1

70819137926. -1

70819137927. 0

70819137928. 2

Question Number : 18 Question Id : 70819111677 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 vectors such that  $|\vec{a}| = |\vec{b}| = \frac{|\vec{c}|}{2} = 1$ . If  $\vec{a} \times (\vec{a} \times \vec{c}) + \vec{b} = \vec{0}$ , then

the acute angle between  $\vec{a}$  and  $\vec{c}$  is :

Options :

70819137929.  $\frac{\pi}{6}$

70819137930.  $\frac{\pi}{4}$

70819137931.  $\frac{\pi}{3}$

70819137932.

$$\frac{5\pi}{12}$$

Question Number : 18 Question Id : 70819111677 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

समजा  $\vec{a}$ ,  $\vec{b}$  आणि  $\vec{c}$  हे तीन सदिश आहेत जसे की  $|\vec{a}| = |\vec{b}| = \frac{|\vec{c}|}{2} = 1$ . जर  $\vec{a} \times (\vec{a} \times \vec{c}) + \vec{b} = \vec{0}$

तर  $\vec{a}$  आणि  $\vec{c}$  मधील लघूकोन (acute angle) \_\_\_\_\_ आहे.

Options :

70819137929.  $\frac{\pi}{6}$

70819137930.  $\frac{\pi}{4}$

70819137931.  $\frac{\pi}{3}$

70819137932.  $\frac{5\pi}{12}$

Question Number : 19 Question Id : 70819111678 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Solution of the differential equation  $(1 + y^2)dx = (\tan^{-1}y - x)dy$  is :  
(where c is an arbitrary constant)

Options :

70819137933.  $x = 1 - \tan^{-1}y + ce^{-\tan^{-1}y}$

70819137934.  $y = \tan^{-1}y - 1 + ce^{-\tan^{-1}x}$

70819137935.  $x = \tan^{-1}y - 1 + ce^{-\tan^{-1}y}$

70819137936.  $x = -\tan^{-1}y - 1 - ce^{\tan^{-1}x}$

**Question Number : 19 Question Id : 70819111678 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

$(1+y^2)dx = (\tan^{-1}y - x)dy$  या विकलक समीकरण (differential equation) ची उकल \_\_\_\_\_ आहे.

(जेंव्हा  $c$  संकलनाचा अचल आहे)

**Options :**

70819137933.  $x = 1 - \tan^{-1}y + ce^{-\tan^{-1}y}$

70819137934.  $y = \tan^{-1}y - 1 + ce^{-\tan^{-1}x}$

70819137935.  $x = \tan^{-1}y - 1 + ce^{-\tan^{-1}y}$

70819137936.  $x = -\tan^{-1}y - 1 - ce^{\tan^{-1}x}$

**Question Number : 20 Question Id : 70819111679 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

The values of  $x$ , for which the vectors  $\vec{a} = (x^2 - 16)\hat{i} + 4\hat{j} - (x^2 - 25)\hat{k}$  make acute angles with the (positive directions of) coordinate axes lie in :

**Options :**

70819137937.  $[-5, -4] \cup [4, 5]$

70819137938.  $[-5, 4) \cup (-4, 5]$

70819137939.  $(-5, -4) \cup (4, 5)$

70819137940.  $(-5, 4) \cup (-4, 5)$

**Question Number : 20 Question Id : 70819111679 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

$x$  चे मूल्य \_\_\_\_\_ ज्या साठी  $\vec{a} = (x^2 - 16)\hat{i} + 4\hat{j} - (x^2 - 25)\hat{k}$  हे सदिश धन दिशेच्या (positive directions) निर्देशक अक्षाशी (coordinate axes) लघूकोन करतो, यात आहे.

**Options :**

70819137937.  $[-5, -4] \cup [4, 5]$

70819137938.  $[-5, 4) \cup (-4, 5]$

70819137939.  $(-5, -4) \cup (4, 5)$

70819137940.  $(-5, 4) \cup (-4, 5)$

## Mathematics Section B

<b>Section Id :</b>	708191398
<b>Section Number :</b>	2
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory

Number of Questions :	10
Number of Questions to be attempted :	5
Section Marks :	20
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	708191678
Question Shuffling Allowed :	Yes

Question Number : 21 Question Id : 70819111680 Question Type : SA

Correct Marks : 4 Wrong Marks : 0

$$\int_0^{\pi} \sqrt{\frac{1 + \cos 2x}{2}} dx \text{ is } \underline{\hspace{2cm}}.$$

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

5 to 5.001

Question Number : 21 Question Id : 70819111680 Question Type : SA

Correct Marks : 4 Wrong Marks : 0

$$\int_0^{\pi} \sqrt{\frac{1 + \cos 2x}{2}} dx \underline{\hspace{2cm}} \text{ आहे.}$$

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :



5 to 5.001

Question Number : 22 Question Id : 70819111681 Question Type : SA

Correct Marks : 4 Wrong Marks : 0

The minimum value of  $9\tan^2\theta + 4\cot^2\theta$  is \_\_\_\_\_.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

5 to 5.001

Question Number : 22 Question Id : 70819111681 Question Type : SA

Correct Marks : 4 Wrong Marks : 0

$9\tan^2\theta + 4\cot^2\theta$  चे किमान मूल्य (minimum value) \_\_\_\_\_ आहे

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

5 to 5.001

Question Number : 23 Question Id : 70819111682 Question Type : SA

Correct Marks : 4 Wrong Marks : 0

The length of the perpendicular from the point  $(1, 2, 3)$  to the line  $\frac{-x+6}{-3} = \frac{y-7}{2} = \frac{z-7}{-2}$  is \_\_\_\_\_.

Response Type : Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

5 to 5.001

**Question Number :** 23 **Question Id :** 70819111682 **Question Type :** SA

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

(1, 2, 3) या बिंदूपासून  $\frac{-x+6}{-3} = \frac{y-7}{2} = \frac{z-7}{-2}$  या रेषेवर काढलेल्या लंबाची (perpendicular) लांबी \_\_\_\_\_ आहे.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

5 to 5.001

**Question Number :** 24 **Question Id :** 70819111683 **Question Type :** SA

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

If  $\log_3 2, \log_3(2^x - 5)$  and  $\log_3\left(2^x - \frac{7}{2}\right)$  are in Arithmetic Progression, then the value of  $x$  is \_\_\_\_\_.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

5 to 5.001

**Question Number : 24 Question Id : 70819111683 Question Type : SA**

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

जर  $\log_3 2, \log_3 (2^x - 5)$  आणि  $\log_3 \left(2^x - \frac{7}{2}\right)$  हे गणित श्रेढी (Arithmetic Progression) मध्ये आहेत.  
तर  $x$  चे मूल्य \_\_\_\_\_ आहे.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Range**

**Text Areas : PlainText**

**Possible Answers :**

5 to 5.001

**Question Number : 25 Question Id : 70819111684 Question Type : SA**

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

If  $x^2 + x + 1 = 0$ , then  $-\left\{\left(x - \frac{1}{x}\right)^2 + \left(x^2 - \frac{1}{x^2}\right)^2 + \left(x^3 - \frac{1}{x^3}\right)^2\right\}$  is \_\_\_\_\_.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Range**

**Text Areas : PlainText**

**Possible Answers :**

5 to 5.001

**Question Number : 25 Question Id : 70819111684 Question Type : SA**

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

जर  $x^2+x+1=0$  तर  $\left\{\left(x-\frac{1}{x}\right)^2+\left(x^2-\frac{1}{x^2}\right)^2+\left(x^3-\frac{1}{x^3}\right)^2\right\}$  \_\_\_\_\_ आहे.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

5 to 5.001

**Question Number :** 26 **Question Id :** 70819111685 **Question Type :** SA

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

$x^2+y^2-4x-2y-11=0$  is a circle to which tangents are drawn from the point (4, 5) which form a quadrilateral with a pair of radii. The area of this quadrilateral in square units is \_\_\_\_\_.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

5 to 5.001

**Question Number :** 26 **Question Id :** 70819111685 **Question Type :** SA

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

$x^2+y^2-4x-2y-11=0$  हे एक वर्तुळ आहे त्या वर्तुळाला (4, 5) या बिंदूपासून स्पर्शिका काढल्या असता त्याच्या त्रिज्येच्या जोडी सह एक चौकोन तयार होतो. त्या चौकोनाचे (quadrilateral) क्षेत्रफळ चौरस एकक मध्ये \_\_\_\_\_ आहे.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

5 to 5.001

**Question Number : 27 Question Id : 70819111686 Question Type : SA**

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

If the sum of mean and variance of a binomial distribution is 15 and the sum of their squares is 117, then the number of independent trials is equal to \_\_\_\_\_.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

5 to 5.001

**Question Number : 27 Question Id : 70819111686 Question Type : SA**

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

जर एका द्विपद वितरणाचे (binomial distribution) मध्य (mean) आणि प्रचरण (variance) यांची बेरीज 15 आहे आणि त्यांच्या वर्गाची बेरीज 117 आहे, तर स्वतंत्रपणे घेतलेल्या चाचणी (independent trials) ची संख्या बरोबर \_\_\_\_\_ आहे.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

5 to 5.001

**Question Number : 28 Question Id : 70819111687 Question Type : SA**

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

Let the equation of the plane passing through the points  $(1, 2, 6)$ ,  $(2, 5, 7)$  and perpendicular to the plane  $4x - y + z = 15$  be  $ax + by + cz + d = 0$ . If  $a, b, c, d \in \mathbb{Z}$  with  $\gcd(|a|, |b|, |c|) = 1$ , then  $|a + b + c + d|$  is equal to \_\_\_\_\_.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Range**

**Text Areas : PlainText**

**Possible Answers :**

5 to 5.001

**Question Number : 28 Question Id : 70819111687 Question Type : SA**

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

समजा  $(1, 2, 6)$ ,  $(2, 5, 7)$  या बिंदूंमधून जाणारे आणि  $4x - y + z = 15$  या प्रतलाला लंब असणाऱ्या प्रतलाचे समीकरण  $ax + by + cz + d = 0$  आहे. जर  $a, b, c, d \in \mathbb{Z}$  सह  $\gcd(|a|, |b|, |c|) = 1$ , तर  $|a + b + c + d|$  बरोबर \_\_\_\_\_.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Range**

**Text Areas : PlainText**

**Possible Answers :**

5 to 5.001

**Question Number : 29 Question Id : 70819111688 Question Type : SA**

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

The number of real solutions in the interval  $\left[-\frac{3\pi}{2}, \frac{7\pi}{2}\right]$  of the equation  $4\sin^2 x - 8\sin x + 3 = 0$  is \_\_\_\_\_.

**Response Type : Numeric**

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

5 to 5.001

**Question Number :** 29 **Question Id :** 70819111688 **Question Type :** SA

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

$4\sin^2x - 8\sin x + 3 = 0$  या समीकरण ची  $\left[-\frac{3\pi}{2}, \frac{7\pi}{2}\right]$  या अंतराला (interval) मधील वास्तव (real) उकलींची संख्या \_\_\_\_\_ आहे.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

5 to 5.001

**Question Number :** 30 **Question Id :** 70819111689 **Question Type :** SA

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

Let  $A_1, A_2, A_3, \dots$  be an increasing geometric progression. If  $\frac{1}{A_4} + \frac{1}{A_8} = \frac{10}{63}$  and  $A_5 A_7 = 441$ , then  $3(A_2 + A_4)$  is equal to \_\_\_\_\_.

**Response Type :** Numeric

**Evaluation Required For SA :** Yes

**Show Word Count :** Yes

**Answers Type :** Range

**Text Areas :** PlainText

**Possible Answers :**

5 to 5.001

**Question Number : 30 Question Id : 70819111689 Question Type : SA**

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

समजा  $A_1, A_2, A_3, \dots$  ही वाढती भूमिती श्रेढी (increasing geometric progression) आहे, जर

$\frac{1}{A_4} + \frac{1}{A_8} = \frac{10}{63}$  आणि  $A_5 A_7 = 441$ , तर  $3(A_2 + A_4)$  बरोबर \_\_\_\_\_ आहे.

**Response Type : Numeric**

**Evaluation Required For SA : Yes**

**Show Word Count : Yes**

**Answers Type : Range**

**Text Areas : PlainText**

**Possible Answers :**

5 to 5.001

## Aptitude Test

<b>Section Id :</b>	708191399
<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>Mark As Answered Required? :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	708191679
<b>Question Shuffling Allowed :</b>	Yes



**Question Number : 31 Question Id : 70819111690 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

Which among the following is the full form of the 'UNESCO' ?

**Options :**

70819137951. United Nations Educational, Scientific & Cultural Organization.

70819137952. United Nations Educational Security Cultural Organization.

70819137953. United Nations Entrance Site Calling Organization.

70819137954. United Nations Educational, Sustainable & Cultural Organization.

**Question Number : 31 Question Id : 70819111690 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

खाली दिलेल्या पर्यायामधील 'युनेस्को' चे योग्य दीर्घरूप ओळखा :

**Options :**

70819137951. युनायटेड नेशन्स एजुकेशनल, सायंटिफीक अँड कल्चरल ऑरगनायजेशन

70819137952. युनायटेड नेशन्स एजुकेशनल सेक्युरिटी कल्चरल ऑरगनायजेशन

70819137953. युनायटेड नेशन्स एन्ट्रन्स साईट कॉलिंग ऑरगनायजेशन

70819137954. युनायटेड नेशन्स एजुकेशनल, सस्टेनेबल अँड कल्चरल ऑरगनायजेशन

**Question Number : 32 Question Id : 70819111691 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

(I) Hall of Nation

(a)



(II) Falling Water, Pennsylvania

(b)



(III) Petronas Tower

(c)



(IV) Secretariat

(d)



**Options :**

70819137955. (I)-(b), (II)-(a), (III)-(d), (IV)-(c)

70819137956. (I)-(c), (II)-(d), (III)-(a), (IV)-(b)

70819137957. (I)-(a), (II)-(b), (III)-(c), (IV)-(d)

70819137958. (I)-(b), (II)-(a), (III)-(c), (IV)-(d)

Question Number : 32 Question Id : 70819111691 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

सूची - I व सूची - II मधील योग्य जोड्या जुळवा :

सूची - I

सूची - II

(I) हॉल ऑफ नेशन

(a)



(II) फॉलिंग वॉटर, पेनसिलव्हेनिया

(b)



(III) पेट्रोनस टॉवर

(c)



(IV) सेक्रेटरीयट

(d)



**Options :**

70819137955. (I)-(b), (II)-(a), (III)-(d), (IV)-(c)

70819137956. (I)-(c), (II)-(d), (III)-(a), (IV)-(b)

70819137957. (I)-(a), (II)-(b), (III)-(c), (IV)-(d)

70819137958. (I)-(b), (II)-(a), (III)-(c), (IV)-(d)

**Question Number : 33 Question Id : 70819111692 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
(I) Kamru	(a) Victoria Memorial Hall
(II) Delhi	(b) Badrinath Temple
(III) Fatehpur Sikri	(c) Khirki Masjid
(IV) Kolkata	(d) Buland Darwaja

**Options :**

70819137959. (I)-(b), (II)-(c), (III)-(d), (IV)-(a)

70819137960. (I)-(b), (II)-(d), (III)-(c), (IV)-(a)

70819137961. (I)-(c), (II)-(a), (III)-(b), (IV)-(d)

70819137962. (I)-(b), (II)-(a), (III)-(d), (IV)-(c)

**Question Number : 33 Question Id : 70819111692 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

सूची - I व सूची - II मधील योग्य जोड्या जुळवा :

सूची - I	सूची - II
(I) कामरू	(a) विक्टोरिया मेमोरियल हॉल
(II) दिल्ली	(b) बद्रीनाथ मंदिर
(III) फतेपुर सिक्री	(c) खिरकी मशिद
(IV) कोलकता	(d) बुलंद दरवाजा

**Options :**

70819137959. (I)-(b), (II)-(c), (III)-(d), (IV)-(a)

70819137960. (I)-(b), (II)-(d), (III)-(c), (IV)-(a)

70819137961. (I)-(c), (II)-(a), (III)-(b), (IV)-(d)

70819137962. (I)-(b), (II)-(a), (III)-(d), (IV)-(c)

**Question Number : 34 Question Id : 70819111693 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

(I) Agra fort

(a)



(II) Atala Masjid

(b)



(III) Nalanda University

(c)



(IV) Jagannatha Temple

(d)



**Options :**

70819137963. (I)-(b), (II)-(c), (III)-(a), (IV)-(d)

70819137964. (I)-(a), (II)-(b), (III)-(c), (IV)-(d)

70819137965. (I)-(c), (II)-(a), (III)-(d), (IV)-(b)

70819137966. (I)-(b), (II)-(a), (III)-(c), (IV)-(d)

Question Number : 34 Question Id : 70819111693 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

सूची - I व सूची - II मधील योग्य जोड्या जुळवा :

सूची - I

सूची - II

(I) आग्रा किल्ला

(a)



(II) अटाला मशीद

(b)



(III) नालंदा विश्वविद्यालय

(c)



(IV) जगन्नाथ मंदिर

(d)



Options :

70819137963. (I)-(b), (II)-(c), (III)-(a), (IV)-(d)

70819137964. (I)-(a), (II)-(b), (III)-(c), (IV)-(d)

70819137965. (I)-(c), (II)-(a), (III)-(d), (IV)-(b)

70819137966. (I)-(b), (II)-(a), (III)-(c), (IV)-(d)

**Question Number : 35 Question Id : 70819111694 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	
(I)	Yadvindra Garden	(a)	Manali
(II)	Vishnu Temple	(b)	Amritsar
(III)	Hidimba Temple	(c)	Pinjore
(IV)	Hari Mandir	(d)	Buniyar

**Options :**

70819137967. (I)-(c), (II)-(d), (III)-(b), (IV)-(a)

70819137968. (I)-(c), (II)-(d), (III)-(a), (IV)-(b)

70819137969. (I)-(d), (II)-(b), (III)-(c), (IV)-(a)

70819137970. (I)-(b), (II)-(d), (III)-(a), (IV)-(c)

**Question Number : 35 Question Id : 70819111694 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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



सूची - I व सूची - II मधील योग्य जोड्या जुळवा :

सूची - I

सूची - II

- |                      |             |
|----------------------|-------------|
| (I) यादवेंद्र उद्यान | (a) मनाली   |
| (II) विष्णू मंदिर    | (b) अमृतसर  |
| (III) हिडींबा मंदिर  | (c) पिंजोर  |
| (IV) हरी मंदिर       | (d) बुनियार |

**Options :**

70819137967. (I)-(c), (II)-(d), (III)-(b), (IV)-(a)

70819137968. (I)-(c), (II)-(d), (III)-(a), (IV)-(b)

70819137969. (I)-(d), (II)-(b), (III)-(c), (IV)-(a)

70819137970. (I)-(b), (II)-(d), (III)-(a), (IV)-(c)

**Question Number : 36 Question Id : 70819111695 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

- |                     |               |
|---------------------|---------------|
| (I) Mehrangarh Fort | (a) Hyderabad |
| (II) Siri Fort      | (b) Kolkata   |
| (III) Golconda Fort | (c) Delhi     |
| (IV) Fort William   | (d) Jodhpur   |

Choose the correct answer from options given below :

**Options :**

70819137971. (I)-(a), (II)-(d), (III)-(b), (IV)-(c)

70819137972. (I)-(d), (II)-(c), (III)-(a), (IV)-(b)

70819137973. (I)-(d), (II)-(c), (III)-(b), (IV)-(a)

70819137974. (I)-(a), (II)-(b), (III)-(d), (IV)-(c)

**Question Number : 36 Question Id : 70819111695 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

सूची - I व सूची - II मधील योग्य जोड्या जुळवा :

सूची - I	सूची - II
(I) मेहरानगढ किल्ला	(a) हैद्राबाद
(II) सिरी किल्ला	(b) कोलकत्ता
(III) गोवळकोंडा किल्ला	(c) दिल्ली
(IV) फोर्ट विल्लियम	(d) जोधपूर

खालीलपैकी योग्य पर्याय निवडा :

**Options :**

70819137971. (I)-(a), (II)-(d), (III)-(b), (IV)-(c)

70819137972. (I)-(d), (II)-(c), (III)-(a), (IV)-(b)

70819137973. (I)-(d), (II)-(c), (III)-(b), (IV)-(a)

70819137974. (I)-(a), (II)-(b), (III)-(d), (IV)-(c)

**Question Number : 37 Question Id : 70819111696 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

Book 'God of small things' is written by which Indian Architect ?

**Options :**

70819137975. B.V. Doshi

70819137976. Arundhati Roy

70819137977. Revati Kamat

70819137978. Bimal Patel

**Question Number : 37 Question Id : 70819111696 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

कोणते भारतीय वास्तुविद्याविशारद हे 'गॉड ऑफ स्मॉल थिंग्स' या पुस्तकाचे लेखक आहेत?

**Options :**

70819137975. बि.व्हि. दोशी

70819137976. अरुंधती रॉय

70819137977. रेवती कामत

70819137978. बिमल पटेल

**Question Number : 38 Question Id : 70819111697 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

'Jharokha' is a type of window mostly found in :

**Options :**

70819137979. Gujarat

70819137980. West Bengal

70819137981. Tamil Nadu

70819137982. Rajasthan

**Question Number : 38 Question Id : 70819111697 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

'झरोखा' या पद्धतीची खिडकी कोठे पहायला मिळते?

**Options :**

70819137979. गुजरात

70819137980. पश्चिम बंगाल

70819137981. तमिळनाडू

70819137982. राजस्थान

**Question Number : 39 Question Id : 70819111698 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

The monsoon wind enters in Indian sub-continent from which direction ?

**Options :**

70819137983. North-West side

70819137984. South-East side

70819137985. North side

70819137986. South-West side

**Question Number : 39 Question Id : 70819111698 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

भारतीय उपखंडात मौसमी वारे कोणत्या दिशेने प्रवेश करतात?

**Options :**

70819137983. वायव्य दिशा

70819137984. आग्नेय दिशा

70819137985. उत्तर दिशा

70819137986. नैऋत्य दिशा

**Question Number : 40 Question Id : 70819111699 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

Which of the following building represents the colonial Architectural pattern in India ?

**Options :**

70819137987. Bharat Bhavan in Bhopal

70819137988. LIC Building in Delhi

70819137989. Charminar in Hyderabad

70819137990. Victoria Memorial in Kolkata

**Question Number : 40 Question Id : 70819111699 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

खाली दिलेली कोणती भारतीय इमारत 'वसाहती वास्तुकला' पद्धत दर्शविते?

**Options :**

70819137987. भारत भवन भोपाल

70819137988. एल.आय.सी. इमारत दिल्ली

70819137989. चारमिनार हैदराबाद

70819137990. विक्टोरिया मेमोरियल कोलकत्ता

**Question Number : 41 Question Id : 70819111700 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

What is the size of A2 Drawing sheet ?

**Options :**

70819137991.  $420 \times 590$  (mm  $\times$  mm)

70819137992.  $420 \times 594$  (mm  $\times$  mm)

70819137993.  $297 \times 420$  (mm  $\times$  mm)

70819137994.  $420 \times 592$  (mm  $\times$  mm)

**Question Number : 41 Question Id : 70819111700 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

ए-2 चित्र पत्रीकेची/कागदाची मापे काय असतात?

**Options :**

70819137991.  $420 \times 590$  (मिमि  $\times$  मिमि)

70819137992.  $420 \times 594$  (मिमि  $\times$  मिमि)

70819137993.  $297 \times 420$  (मिमि  $\times$  मिमि)

70819137994.  $420 \times 592$  (मिमि  $\times$  मिमि)

**Question Number : 42 Question Id : 70819111701 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

Victory Tower belongs to which of the following fort :

**Options :**

70819137995. Chittor fort

70819137996. Jaigarh fort

70819137997. Bhangarh fort

70819137998. Amer fort

**Question Number : 42 Question Id : 70819111701 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

विजय स्तंभ कोणत्या किल्ल्यावर स्थित आहे?

**Options :**



70819137995. चित्तौड गड

70819137996. जयगड किल्ला

70819137997. भानगड किल्ला

70819137998. अमेर गड किल्ला

**Question Number : 43 Question Id : 70819111702 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

Which amongst the following Architect has designed the famous Temple "Akshardham" ?

**Options :**

70819137999. Sanjay Puri

70819138000. Vikram Lall

70819138001. Ashok Lall

70819138002. C. Sompura

**Question Number : 43 Question Id : 70819111702 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

प्रसिद्ध मंदिर 'अक्षरधाम' ची कोणत्या वास्तुविद्याविशारदाने रचना केली आहे?

**Options :**

70819137999. संजय पूरी



70819138000. विक्रम लाल

70819138001. अशोक लाल

70819138002. सि. सोमपूरा

**Question Number : 44 Question Id : 70819111703 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

'Volume Zero' Documentary is on which Architect ?

**Options :**

70819138003. Charles Correa

70819138004. Richard Mier

70819138005. Jasbir Sachdev

70819138006. Ranjit Sabliki

**Question Number : 44 Question Id : 70819111703 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

'वॉल्युम झिरो' हा माहितीपट कोणत्या वास्तुविद्याविशारदावर आधारित आहे?

**Options :**

70819138003. चार्ल्स कोरिया

70819138004. रिचर्ड मियर

70819138005. जसबिर सचदेव

70819138006. रणजीत सबलिकी

**Question Number : 45 Question Id : 70819111704 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

'Agenda 21' is declaration related with :

**Options :**

70819138007. Climate change

70819138008. Global warming

70819138009. Sustainable development

70819138010. Smart city

**Question Number : 45 Question Id : 70819111704 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

'अजेंडा-21' हे घोषणापत्र कशाशी निगडीत आहे ?

**Options :**

70819138007. वातावरणातील बदल

70819138008. जागतिक तापमान वाढ

70819138009. शाश्वत विकास

70819138010. स्मार्ट शहर

**Question Number : 46 Question Id : 70819111705 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

Gold mines are situated in which state of India ?

**Options :**

70819138011. Karnataka

70819138012. Orissa

70819138013. Maharashtra

70819138014. Uttar Pradesh

**Question Number : 46 Question Id : 70819111705 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

सोन्याच्या खाणी भारताच्या कोणत्या राज्यात स्थित आहेत ?

**Options :**

70819138011. कर्नाटक

70819138012. ओरिसा

70819138013. महाराष्ट्र

70819138014. उत्तर प्रदेश

**Question Number : 47 Question Id : 70819111706 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

In the Southern Hemisphere shadowless light is from which direction ?

**Options :**

70819138015. North

70819138016. South

70819138017. East

70819138018. West

**Question Number : 47 Question Id : 70819111706 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

दक्षिण गोलार्ध मध्ये सावलीरहित प्रकाश कोणत्या दिशेने असतो ?

**Options :**

70819138015. उत्तर

70819138016. दक्षिण

70819138017. पूर्व

70819138018. पश्चिम

**Question Number : 48 Question Id : 70819111707 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

The first Indian Architect who has won Pritzker Prize in 2018 is :

**Options :**

70819138019. B.V. Doshi

70819138020. Laurie Baker

70819138021. Raj Rewal

70819138022. Achyut Kanvinde

**Question Number : 48 Question Id : 70819111707 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

2018 साली प्रीट्झकर पारितोषिक जिंकणारे पहिले भारतीय वास्तुविद्याविशारद कोण ?

**Options :**

70819138019. बि.व्हि. दोशी

70819138020. लॉरी बेकर

70819138021. राज रेवाल

70819138022. अच्युत कानविंदे

**Question Number : 49 Question Id : 70819111708 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

Word "Bungalow" has originated from :

**Options :**

70819138023. Bengalurm

70819138024. Banaras

70819138025. Bengal

70819138026. Bari

**Question Number : 49 Question Id : 70819111708 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

'बंगलो' या शब्दाचे मूळ कोठून आले आहे ?

**Options :**

70819138023. बेंगालुरम

70819138024. बनारस

70819138025. बंगाल

70819138026. बारी

**Question Number : 50 Question Id : 70819111709 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

The IIM - Ahmedabad is designed by which of the following Architect ?

**Options :**

70819138027. Laurie Baker

70819138028. Louis Kahn

70819138029. Lutyen

70819138030. Le Corbusier

**Question Number : 50 Question Id : 70819111709 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

खाली दिलेल्या कोणत्या वास्तुकाराने आय.आय.एम. अहमदाबाद ची रचना केली आहे ?

**Options :**

70819138027. लॉरी बेकर

70819138028. लूई कान

70819138029. ल्युटेन

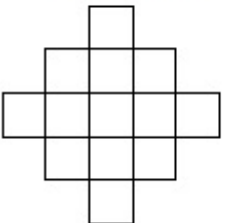
70819138030. ली कारबुसीयर

**Question Number : 51 Question Id : 70819111710 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

In the given figure, how many squares are present ?



**Options :**

70819138031. 14

70819138032. 13

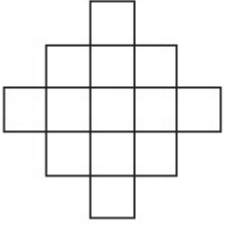
70819138033. 15

70819138034. 18

**Question Number : 51 Question Id : 70819111710 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No**

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

खाली दिलेल्या आकृतीमध्ये किती चौरस आहेत ?



**Options :**

70819138031. 14

70819138032. 13

70819138033. 15

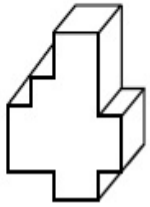
70819138034. 18

**Question Number : 52 Question Id : 70819111711 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No**

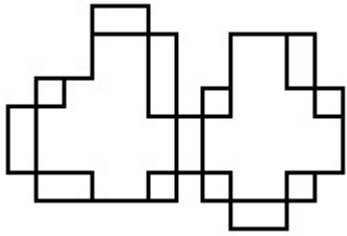
**Correct Marks : 4 Wrong Marks : 1**



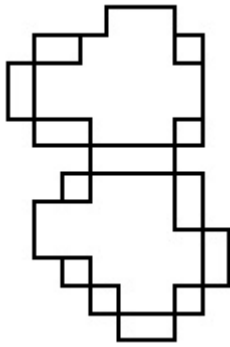
A drawing is provided with all the folds to construct the following three Dimensional object.  
Select the correct one.



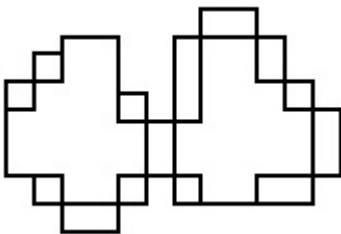
**Options :**



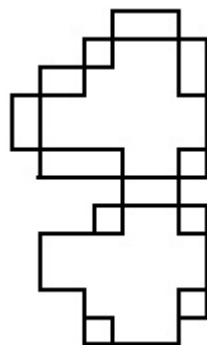
70819138035.



70819138036.



70819138037.

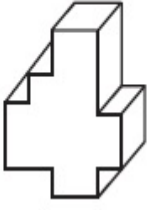


70819138038.

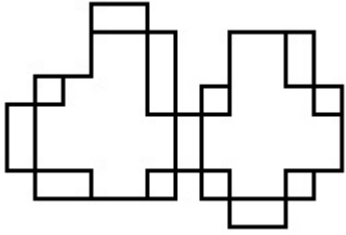
**Is Question Mandatory : No**

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

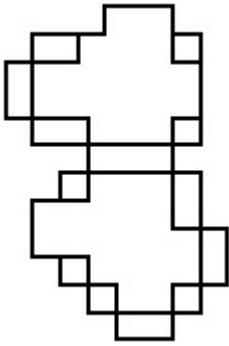
खाली दिलेली त्रिपरिमाणित वस्तु (3-डी) बनविण्यासाठी लागणारी योग्य घडी दर्शविणारी आकृती निवडा.



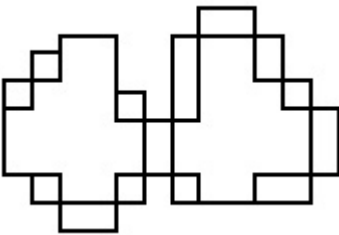
**Options :**



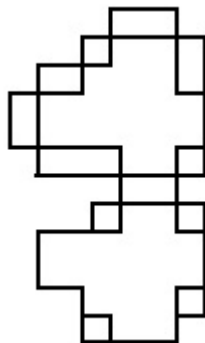
70819138035.



70819138036.



70819138037.



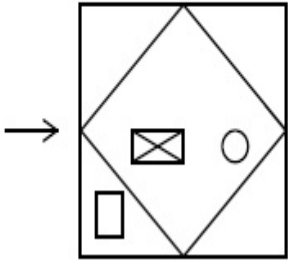
70819138038.

Question Number : 53 Question Id : 7081911712 Question Type : MCQ Option Shuffling : Yes

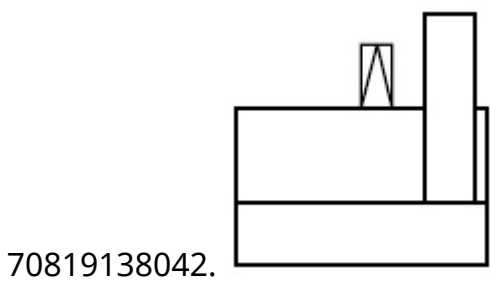
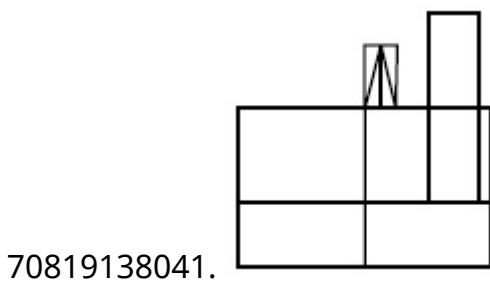
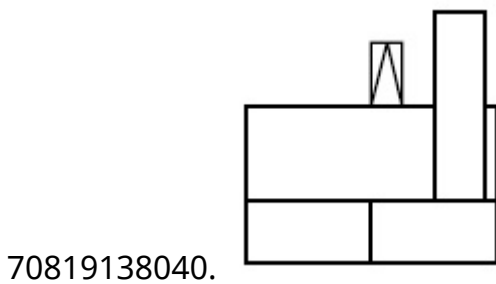
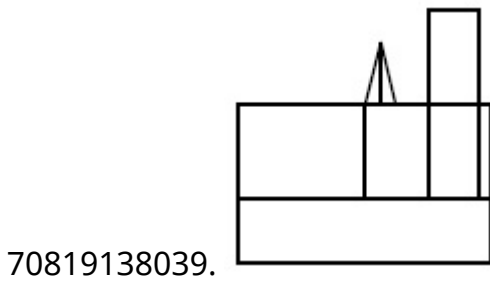
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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



Options :

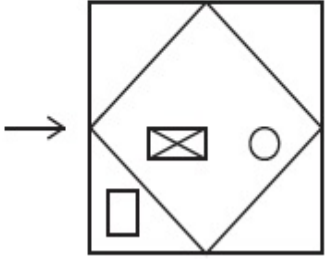


Question Number : 53 Question Id : 70819111712 Question Type : MCQ Option Shuffling : Yes

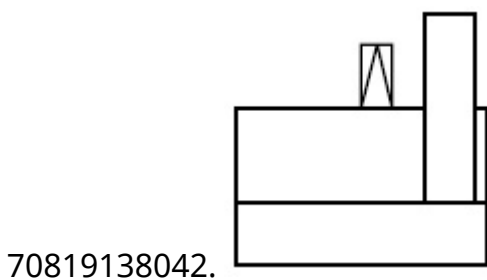
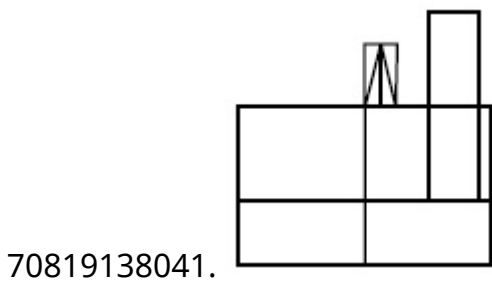
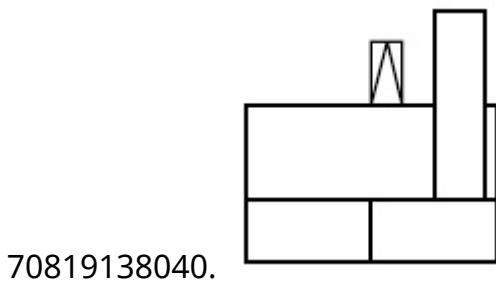
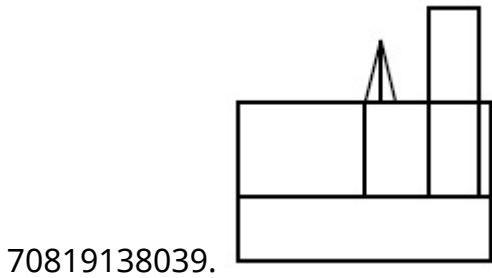
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

दिलेल्या नकाशाकडे बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन उत्तर आकृती मधून निवडा.



Options :

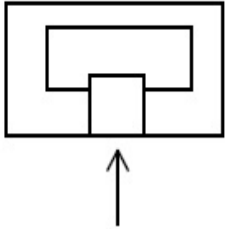


Question Number : 54 Question Id : 70819111713 Question Type : MCQ Option Shuffling : Yes

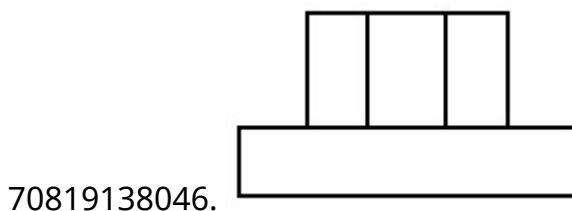
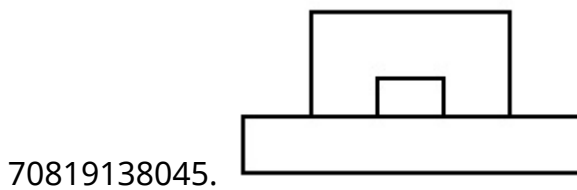
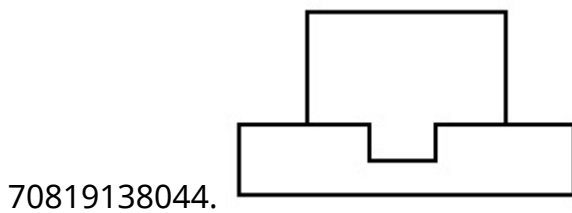
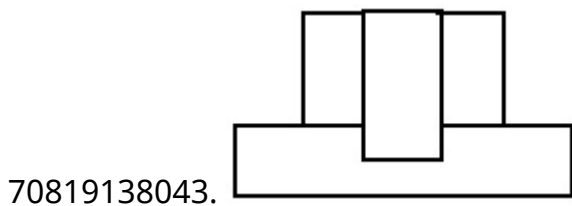
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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



Options :

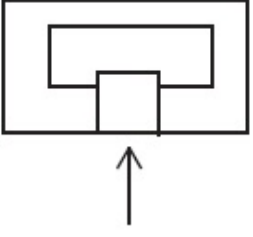


Question Number : 54 Question Id : 70819111713 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

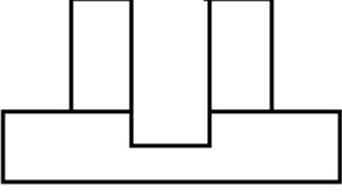
Correct Marks : 4 Wrong Marks : 1

दिलेल्या नकाशाकडे बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन उत्तर आकृती मधून निवडा.

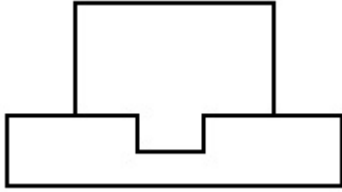


Options :

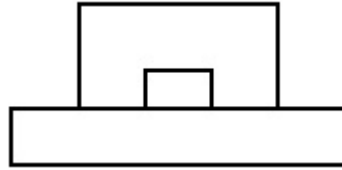
70819138043.



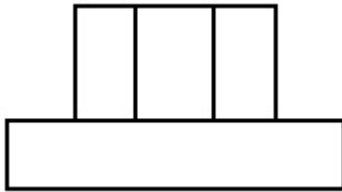
70819138044.



70819138045.



70819138046.

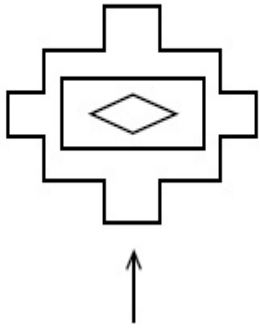


Question Number : 55 Question Id : 70819111714 Question Type : MCQ Option Shuffling : Yes

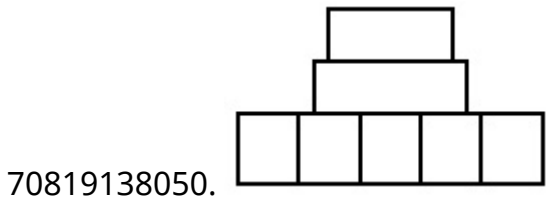
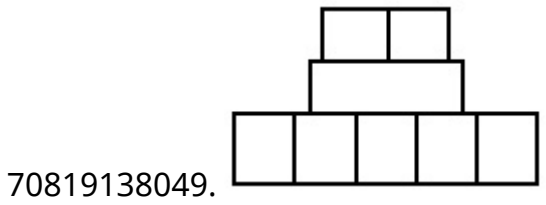
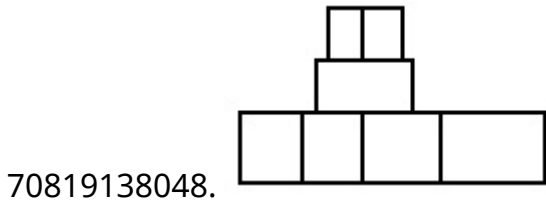
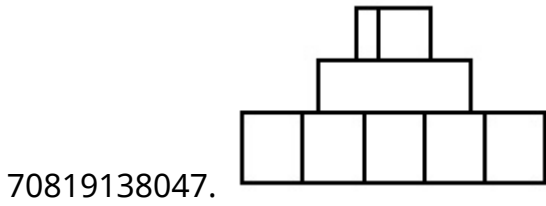
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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



Options :

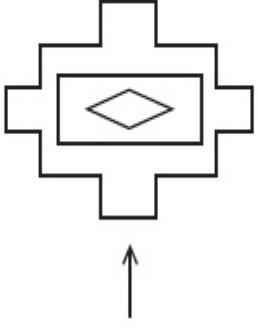


Question Number : 55 Question Id : 70819111714 Question Type : MCQ Option Shuffling : Yes

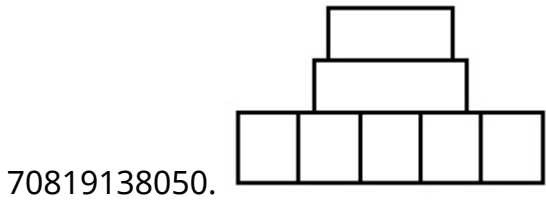
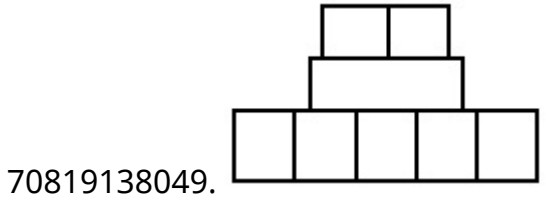
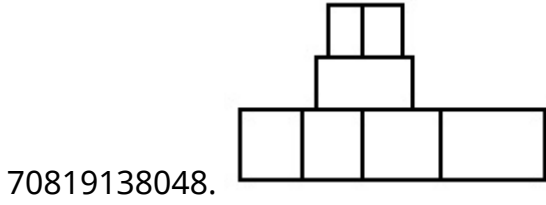
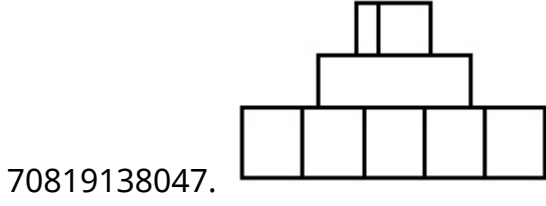
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

दिलेला नकाशा हा एका वस्तुचे वरील दृश्य दर्शवितो. बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन उत्तर आकृती मधून निवडा.



**Options :**



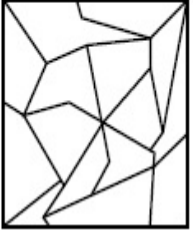
**Question Number : 56 Question Id : 7081911715 Question Type : MCQ Option Shuffling : Yes**

**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 correct one.



**Options :**

70819138051.



70819138052.



70819138053.



70819138054.

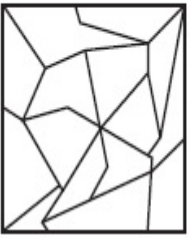


**Question Number : 56 Question Id : 7081911715 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

पर्यायामधे दर्शविलेली एक आकृती ही त्याच दिशेने व समान आकाराने प्रश्न आकृतीमध्ये लपली आहे. योग्य पर्याय निवडा.



**Options :**

70819138051.



70819138052.



70819138053.



70819138054.



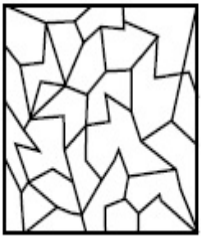
**Question Number : 57 Question Id : 70819111716 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

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

Select correct one.



**Options :**

70819138055.



70819138056.



70819138057.



70819138058.

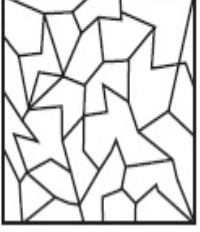


Question Number : 57 Question Id : 70819111716 Question Type : MCQ Option Shuffling : Yes


Is Question Mandatory : No


Correct Marks : 4 Wrong Marks : 1


पर्यायामध्ये दर्शविलेली एक आकृती ही त्याच दिशेने व समान आकाराने प्रश्न आकृतीमध्ये दर्शविली आहे. योग्य पर्याय निवडा.




Options :

70819138055. 

70819138056. 

70819138057. 

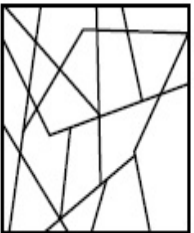
70819138058. 

Question Number : 58 Question Id : 70819111717 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 the correct one.



Options :

70819138059.



70819138060.



70819138061.



70819138062.

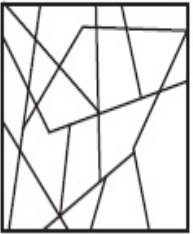


**Question Number : 58 Question Id : 7081911717 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

पर्यायामध्ये दर्शविलेली एक आकृती ही त्याच दिशेने व समान आकाराने प्रश्न आकृतीमध्ये दर्शविलेली आहे. योग्य पर्याय निवडा.



**Options :**

70819138059.



70819138060.



70819138061.



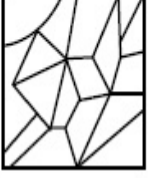
70819138062.



**Question Number : 59 Question Id : 70819111718 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 the correct one.



**Options :**

70819138063.

70819138064.

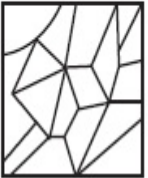
70819138065.

70819138066.


**Question Number : 59 Question Id : 70819111718 Question Type : MCQ Option Shuffling : Yes**  
**Is Question Mandatory : No**


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


पर्याया मध्ये दर्शवलेली आकृती ही त्याच दिशेने व समान आकाराने प्रश्न आकृती मध्ये दर्शविली आहे. योग्य पर्याय निवडा.




**Options :**

70819138063. 

70819138064. 

70819138065. 

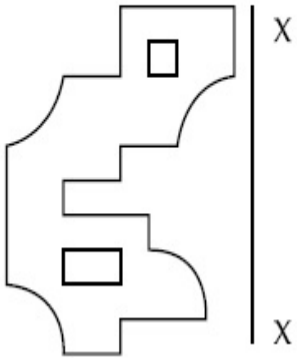
70819138066. 

**Question Number : 60 Question Id : 7081911719 Question Type : MCQ Option Shuffling : Yes**

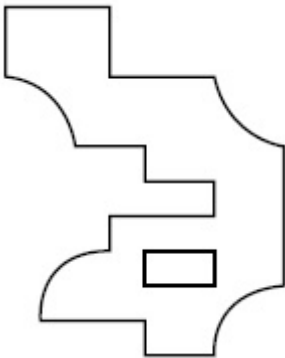
**Is Question Mandatory : No**

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

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

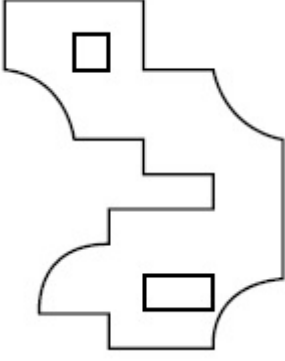
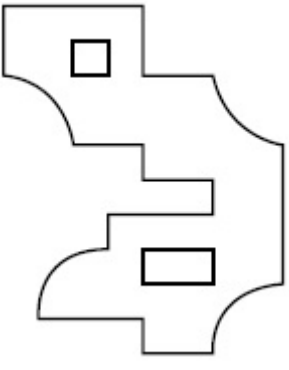


**Options :**

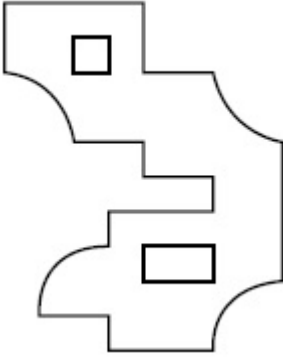


70819138067.

70819138068.



70819138069.

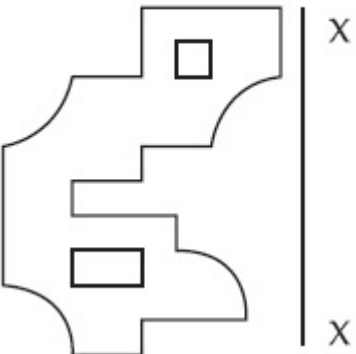


70819138070.

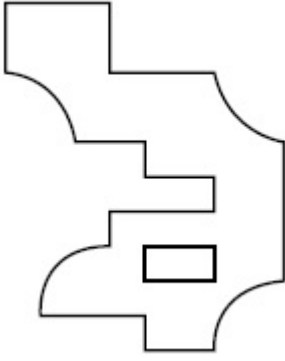
**Question Number : 60 Question Id : 7081911719 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No**

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

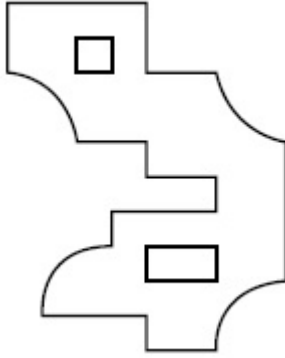
X-X अक्ष गृहीत धरून प्रश्न आकृतीचे योग्य प्रतिबिंब ओळखा?



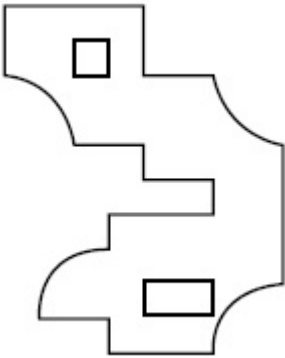
**Options :**



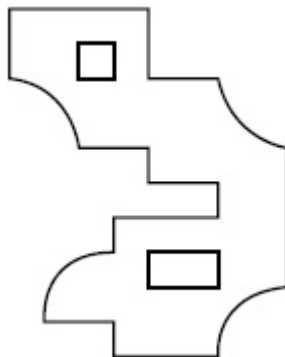
70819138067.



70819138068.



70819138069.

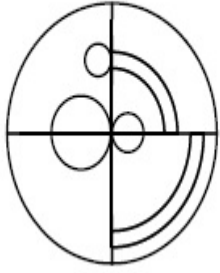


70819138070.



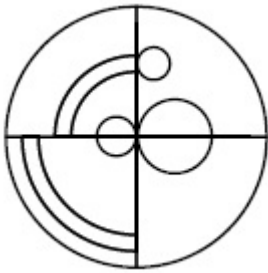
**Correct Marks : 4 Wrong Marks : 1**

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

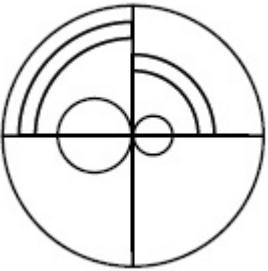


X ——— X

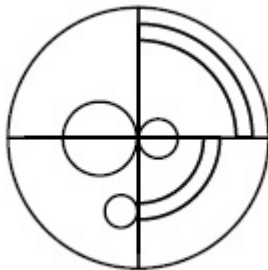
**Options :**



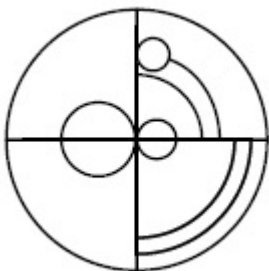
70819138071.



70819138072.



70819138073.



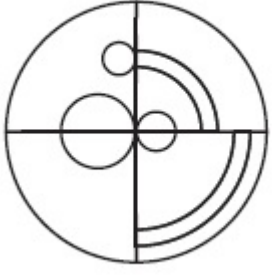
70819138074.

Question Number : 61 Question Id : 70819111720 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

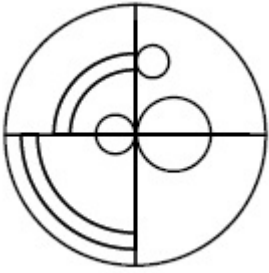
Correct Marks : 4 Wrong Marks : 1

X-X अक्ष गृहीत धरून प्रश्न आकृतीचे योग्य प्रतिबिंब ओळखा.

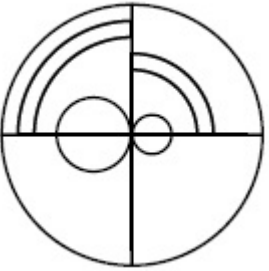


X ————— X

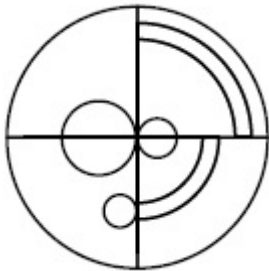
Options :



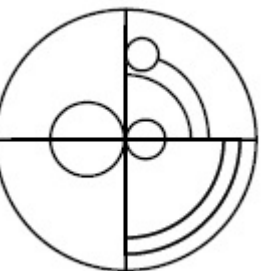
70819138071.



70819138072.



70819138073.

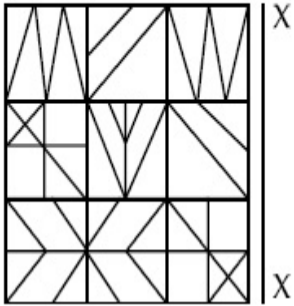


70819138074.

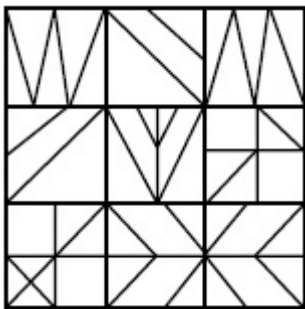
Question Number : 62 Question Id : 70819111721 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

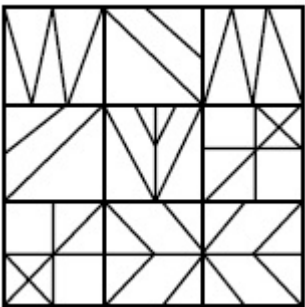
Which one of the answer figures is the correct mirror image of the problem figure with respect to X-X ?



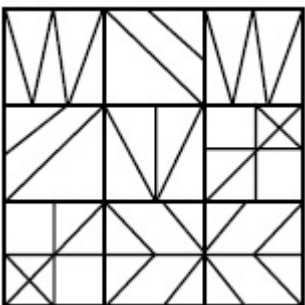
Options :



70819138075.

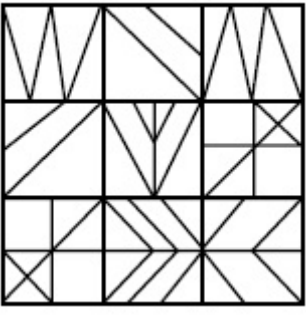


70819138076.



70819138077.

70819138078.

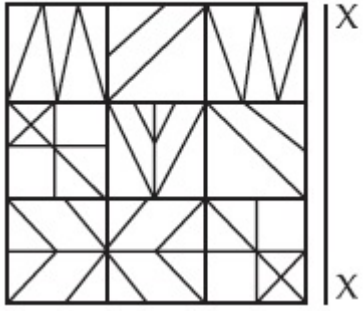


Question Number : 62 Question Id : 70819111721 Question Type : MCQ Option Shuffling : Yes

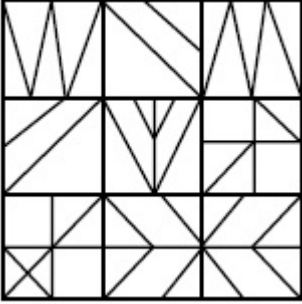
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

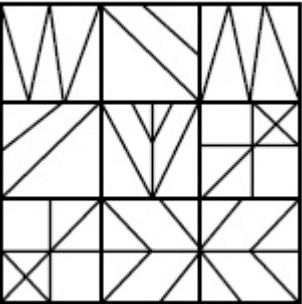
X-X अक्ष गृहीत धरून प्रश्न आकृतीचे योग्य प्रतिबिंब ओळखा.



Options :

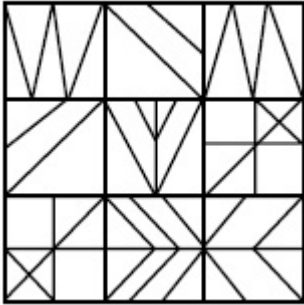
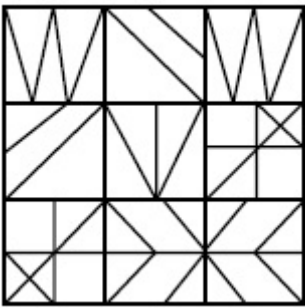


70819138075.



70819138076.

70819138077.



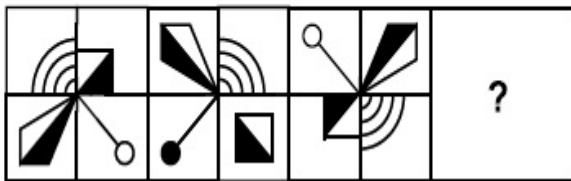
70819138078.

**Question Number : 63 Question Id : 7081911722 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

Which one of the answer figures complete the sequence of the problem figure ? Select the correct one.



**Options :**



70819138079.



70819138080.

70819138081.



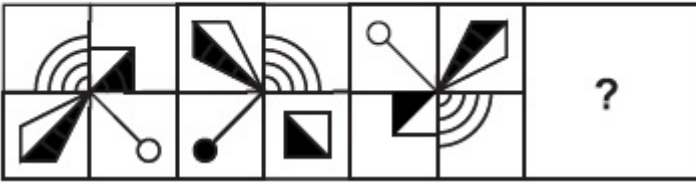
70819138082.

Question Number : 63 Question Id : 7081911722 Question Type : MCQ Option Shuffling : Yes

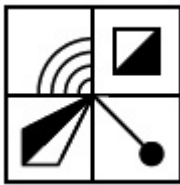
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

कोणती उत्तर आकृती ही दिलेल्या प्रश्न आकृतीची क्रमवारी पूर्ण करते?



Options :



70819138079.



70819138080.



70819138081.

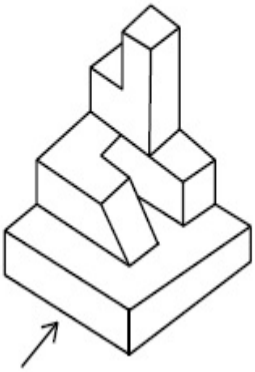
70819138082.



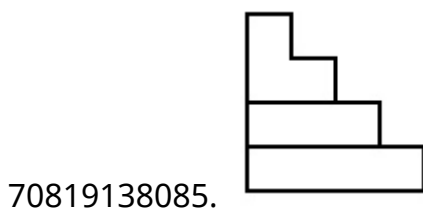
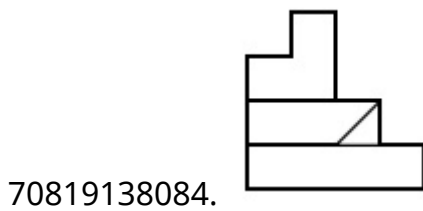
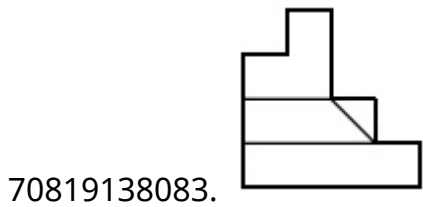
**Question Number : 64 Question Id : 70819111723 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No**

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

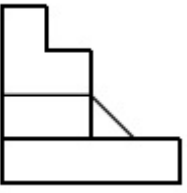
The 3D figure shows the view of an object. Identify the correct view looking in the direction of arrow, amongst the answer figures.



**Options :**



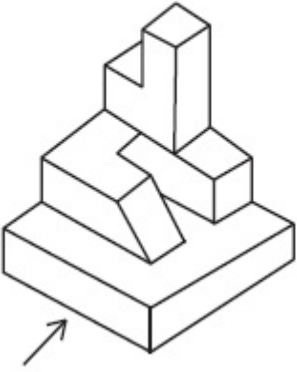
70819138086.



Question Number : 64 Question Id : 70819111723 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No

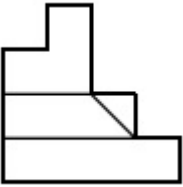
Correct Marks : 4 Wrong Marks : 1

दिलेल्या त्रिपरिमाणित (3-डी) आकृतीकडे बाणाच्या दिशेने पहाता मिळणारे आरेखन ओळखा.

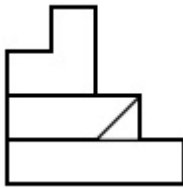


Options :

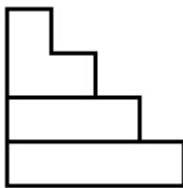
70819138083.



70819138084.

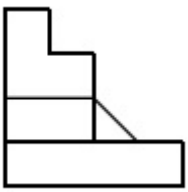


70819138085.



70819138086.

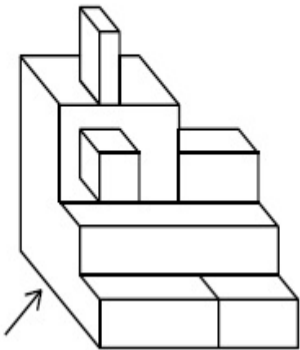




**Question Number : 65 Question Id : 70819111724 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No**

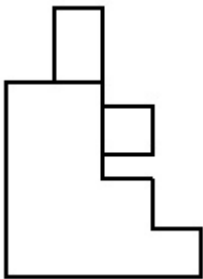
**Correct Marks : 4 Wrong Marks : 1**

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

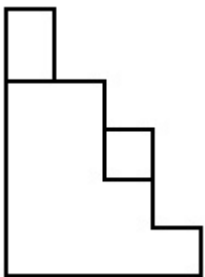


**Options :**

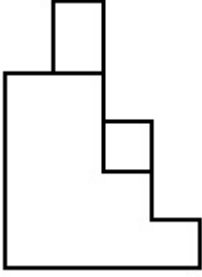
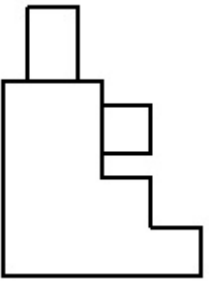
70819138087.



70819138088.



70819138089.



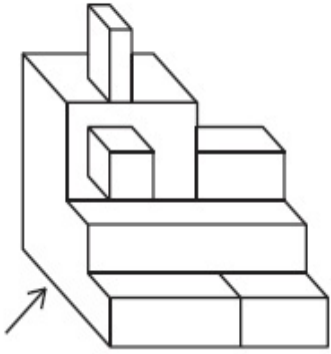
70819138090.

**Question Number : 65 Question Id : 70819111724 Question Type : MCQ Option Shuffling : Yes**

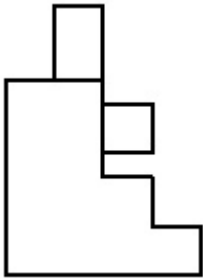
**Is Question Mandatory : No**

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

दिलेल्या त्रिपरिमाणित (3-डी) आकृतीकडे बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन ओळखा.

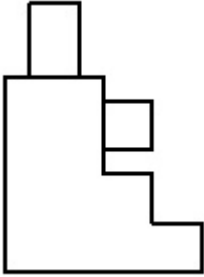
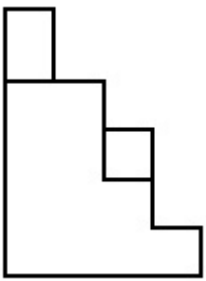


**Options :**

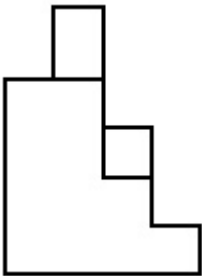


70819138087.

70819138088.



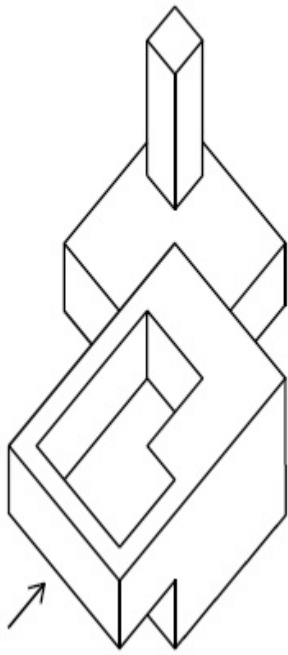
70819138089.



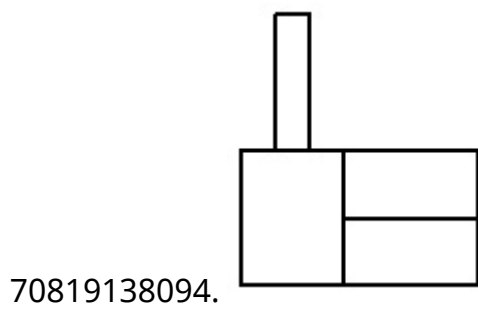
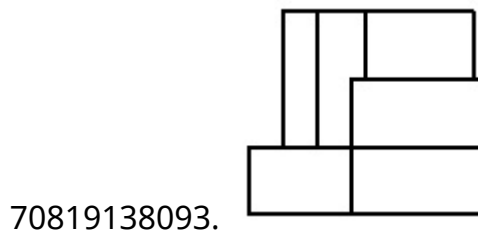
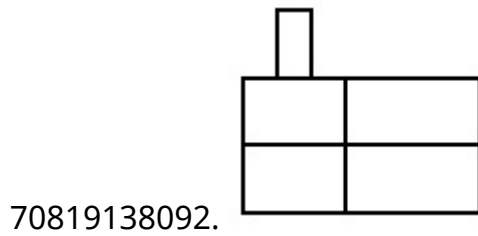
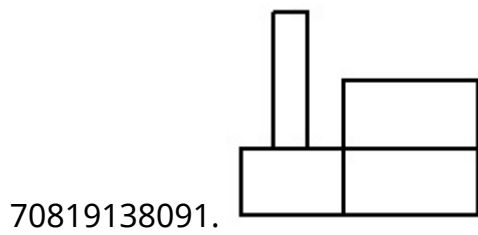
70819138090.

**Question Number : 66 Question Id : 7081911725 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, amongst the answer figures.



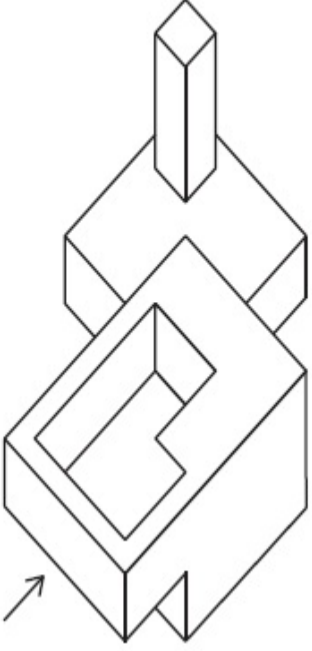
**Options :**



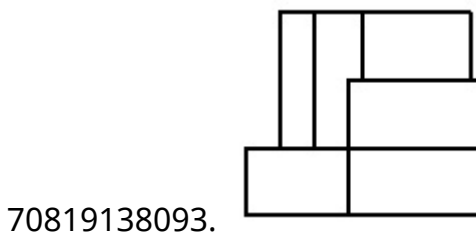
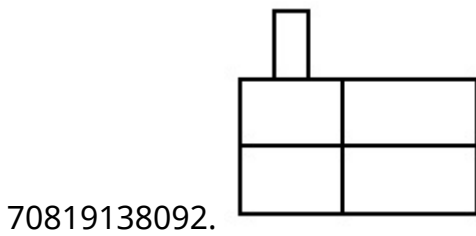
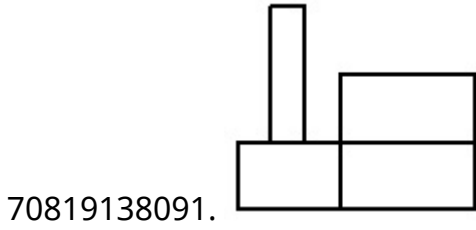
Question Number : 66 Question Id : 70819111725 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

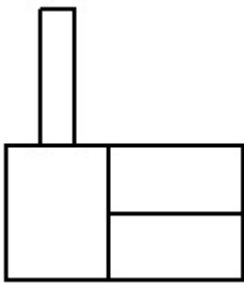
दिलेल्या त्रिपरिमाणित (3-डी) आकृतीकडे बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन ओळखा.



Options :



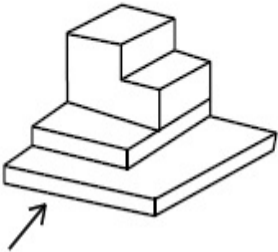
70819138094.



**Question Number : 67 Question Id : 7081911726 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No**

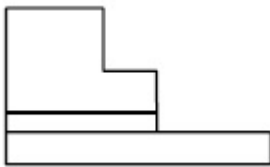
**Correct Marks : 4 Wrong Marks : 1**

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

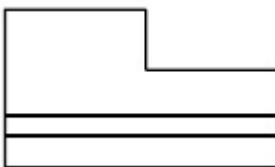


**Options :**

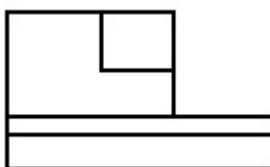
70819138095.



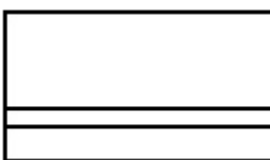
70819138096.



70819138097.



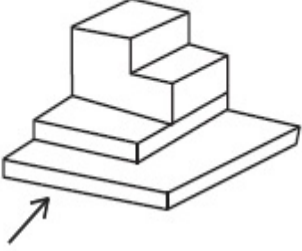
70819138098.



Question Number : 67 Question Id : 70819111726 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No

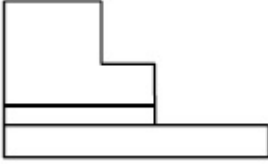
Correct Marks : 4 Wrong Marks : 1

दिलेल्या (3-डी) त्रिपरिमाणित आकृतीकडे बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन ओळखा.

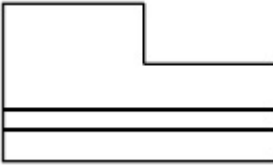


Options :

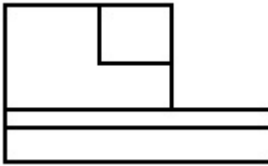
70819138095.



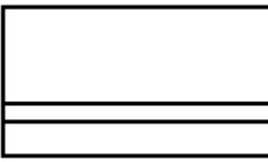
70819138096.



70819138097.



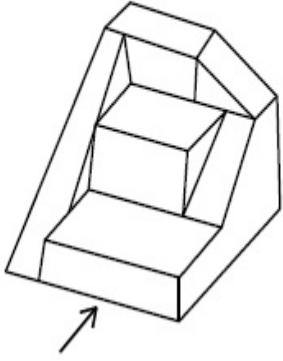
70819138098.



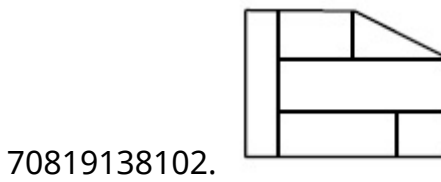
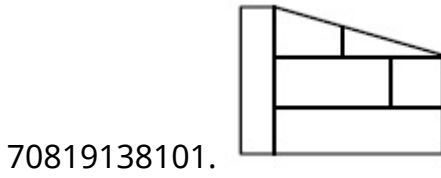
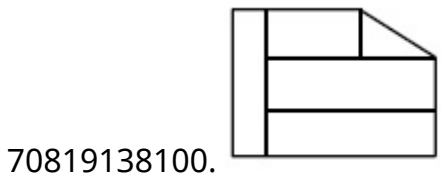
Question Number : 68 Question Id : 70819111727 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No

**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, amongst the answer figures.



**Options :**



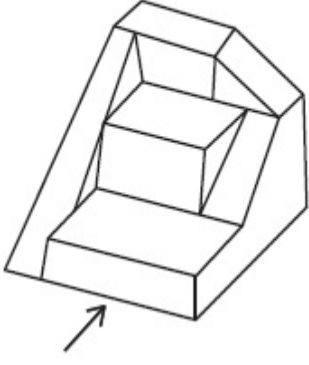
**Question Number : 68 Question Id : 7081911727 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

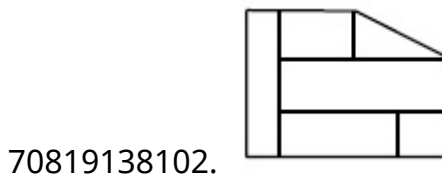
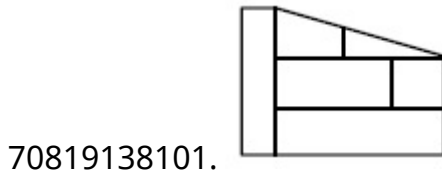
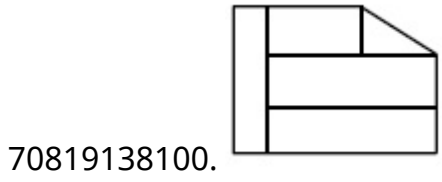
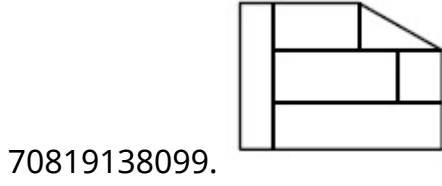
**Correct Marks : 4 Wrong Marks : 1**



दिलेल्या त्रिपरिमाणित (3-डी) आकृतीकडे बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन ओळखा.



Options :

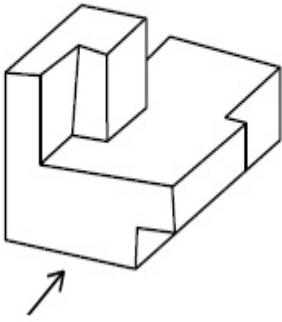


Question Number : 69 Question Id : 7081911728 Question Type : MCQ Option Shuffling : Yes

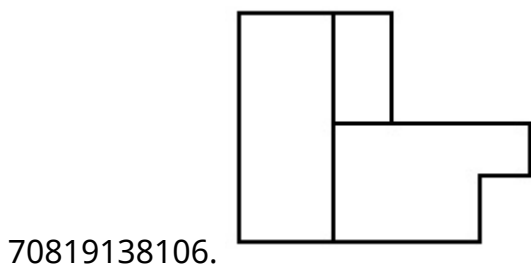
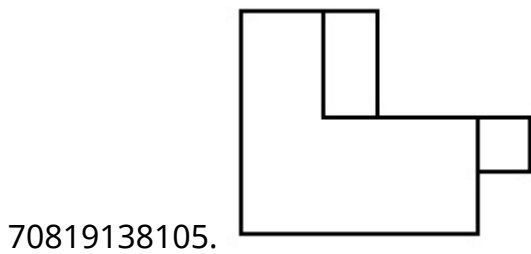
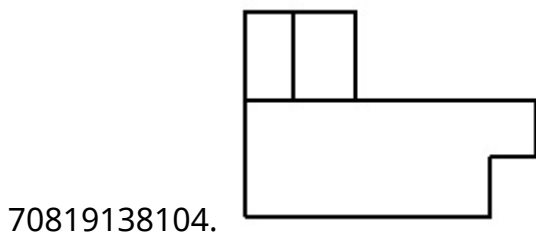
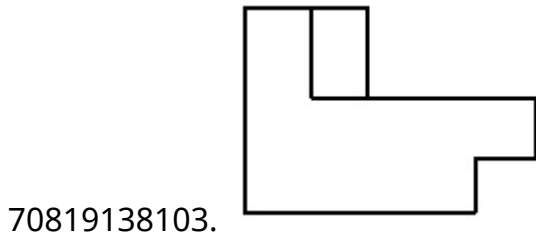
Is Question Mandatory : No

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, amongst the answer figures.



Options :

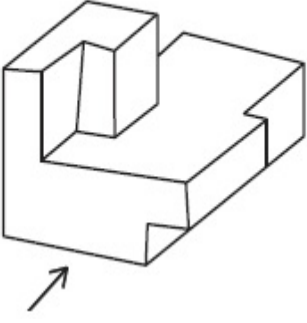


Question Number : 69 Question Id : 7081911728 Question Type : MCQ Option Shuffling : Yes

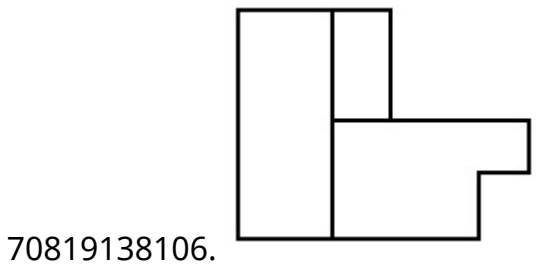
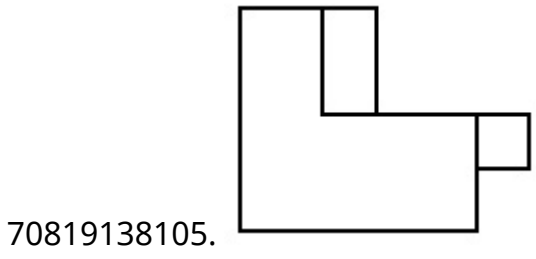
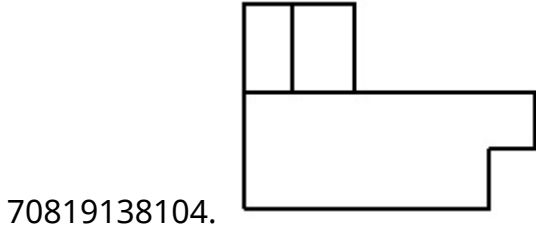
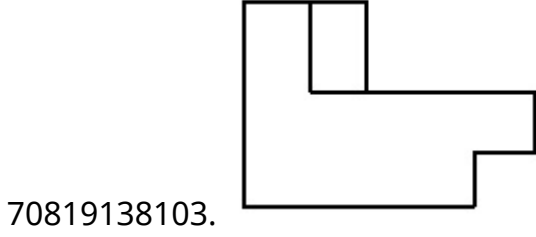
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

दिलेल्या त्रिपरिमाणित (3-डी) आकृतीकडे बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन ओळखा.

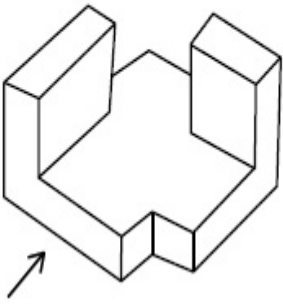


Options :

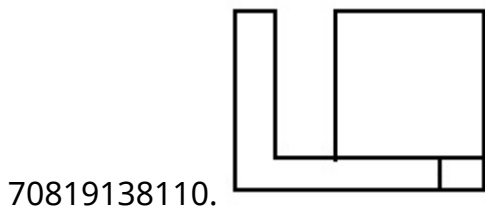
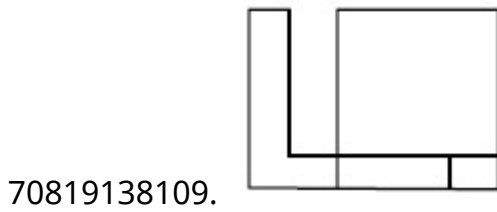
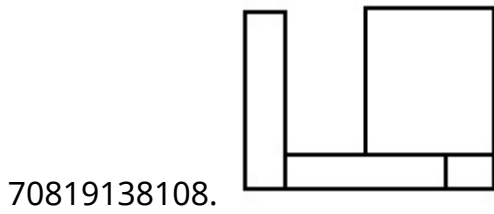
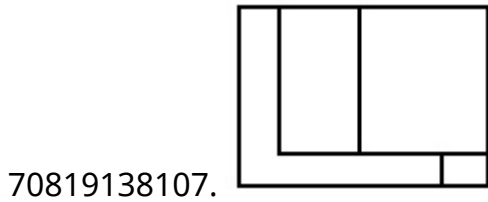


Question Number : 70 Question Id : 7081911729 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No  
Correct Marks : 4 Wrong Marks : 1

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



Options :

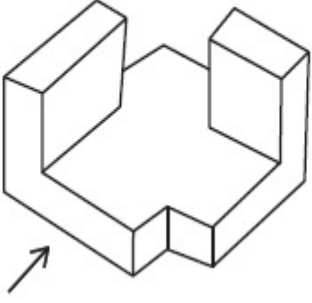


Question Number : 70 Question Id : 7081911729 Question Type : MCQ Option Shuffling : Yes

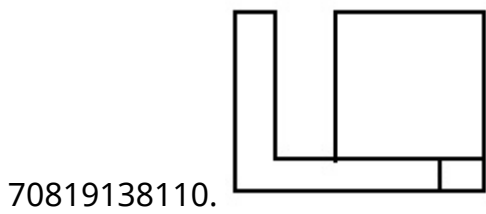
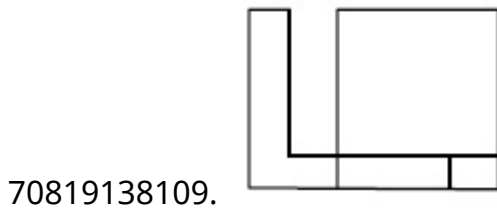
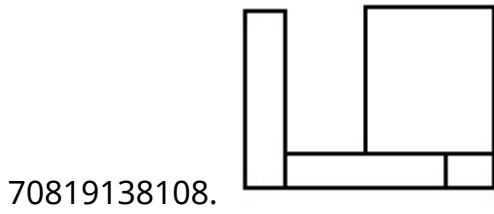
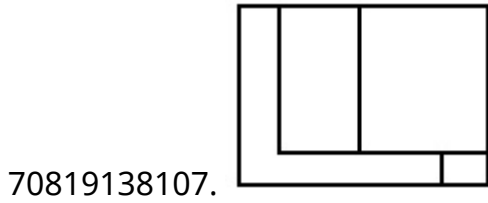
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

दिलेल्या त्रिपरिमाणित (3-डी) आकृतीकडे बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन ओळखा.



**Options :**

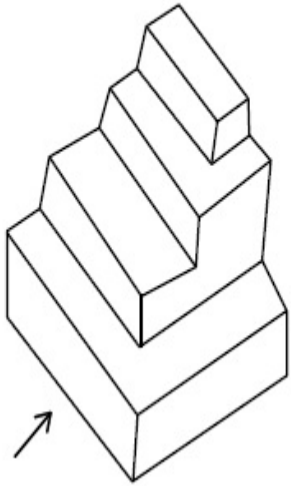


**Question Number : 71 Question Id : 70819111730 Question Type : MCQ Option Shuffling : Yes**

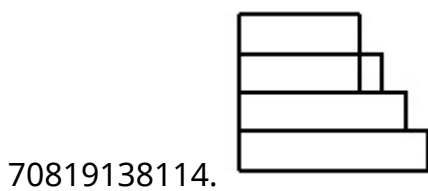
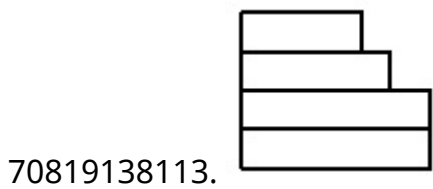
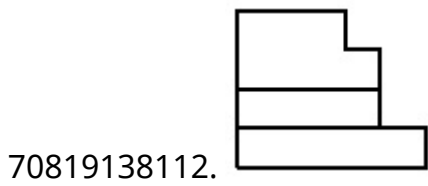
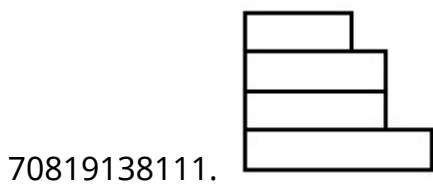
**Is Question Mandatory : No**

**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, amongst the answer figures.



**Options :**

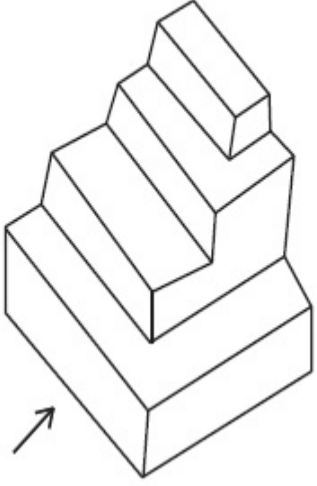


**Question Number : 71 Question Id : 70819111730 Question Type : MCQ Option Shuffling : Yes**

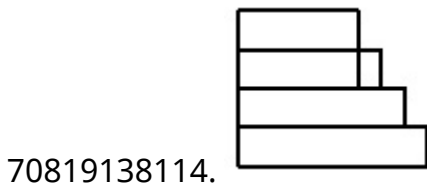
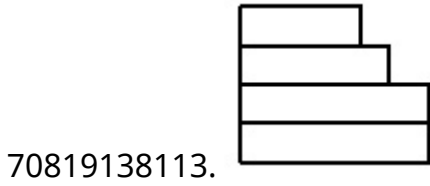
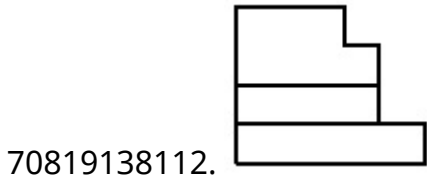
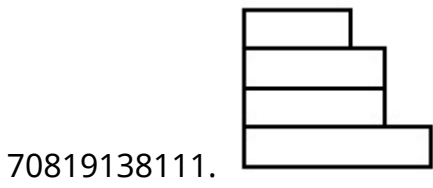
**Is Question Mandatory : No**

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

दिलेल्या त्रिपरिमाणित (3-डी) आकृतीकडे बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन ओळखा.



Options :

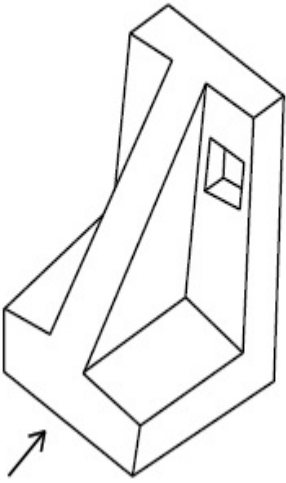


Question Number : 72 Question Id : 70819111731 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

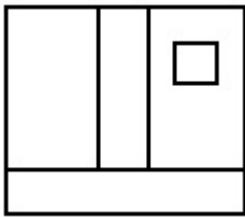
Correct Marks : 4 Wrong Marks : 1

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

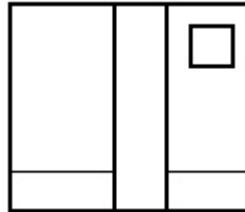


Options :

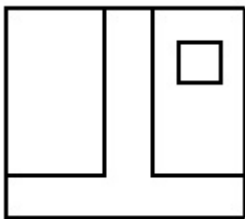
70819138115.



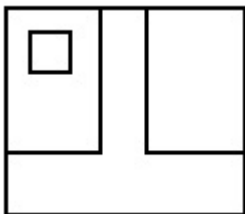
70819138116.



70819138117.



70819138118.

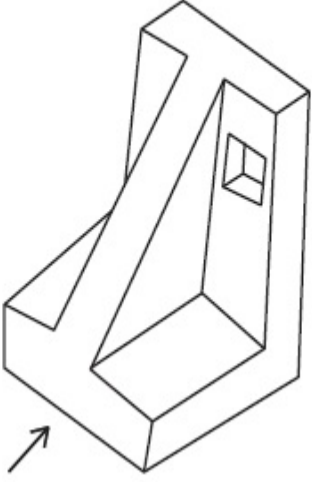




Is Question Mandatory : No

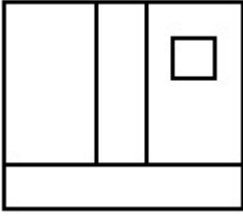
Correct Marks : 4 Wrong Marks : 1

दिलेल्या त्रिपरिमाणित (3-डी) आकृतीकडे बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन ओळखा.

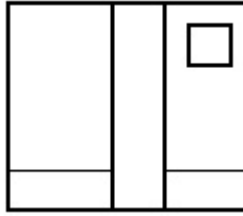


Options :

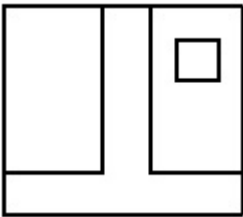
70819138115.



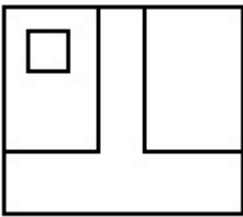
70819138116.



70819138117.



70819138118.

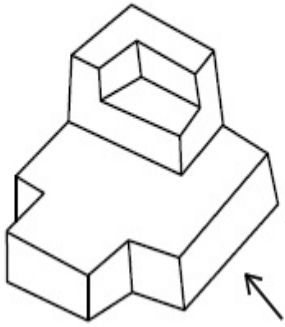


Question Number : 73 Question Id : 70819111732 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

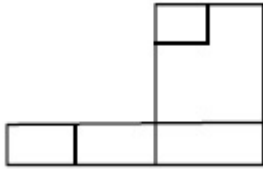
Correct Marks : 4 Wrong Marks : 1

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

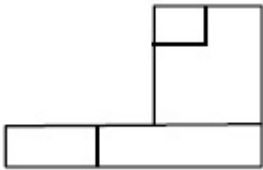


Options :

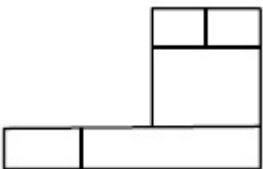
70819138119.



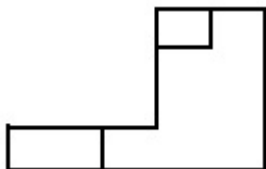
70819138120.



70819138121.



70819138122.

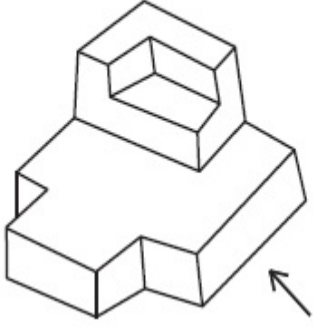


Question Number : 73 Question Id : 70819111732 Question Type : MCQ Option Shuffling : Yes

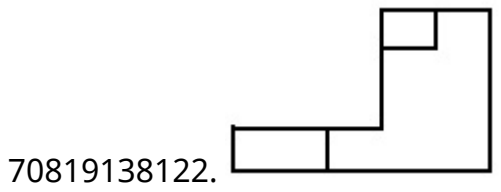
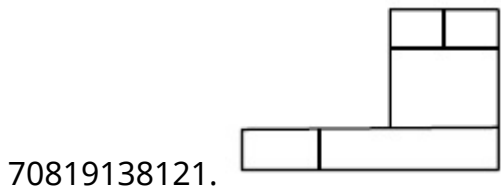
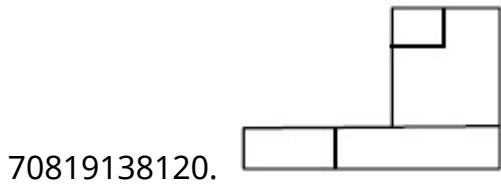
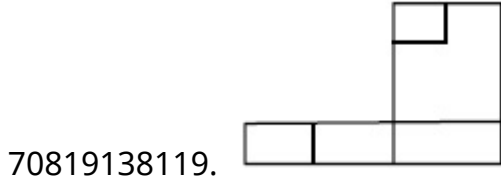
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

दिलेल्या त्रिपरिमाणित (3-डी) आकृतीकडे बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन ओळखा.



Options :

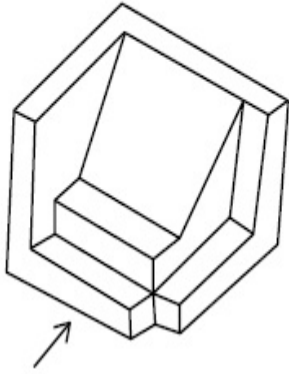


Question Number : 74 Question Id : 7081911733 Question Type : MCQ Option Shuffling : Yes

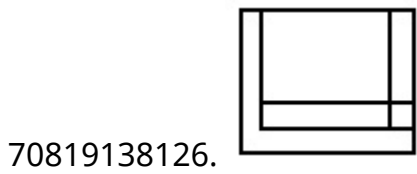
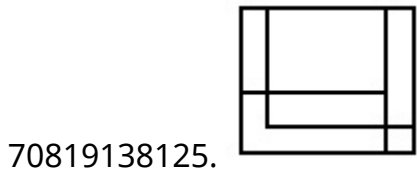
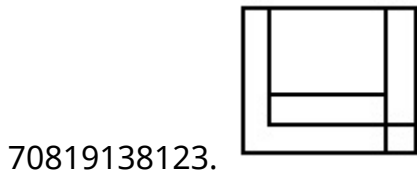
Is Question Mandatory : No

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, amongst the answer figures.



**Options :**

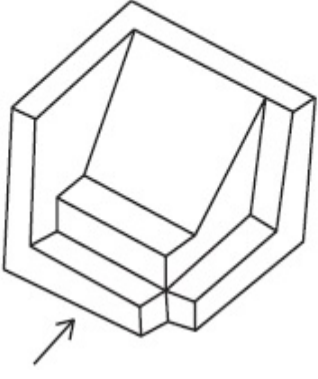


**Question Number : 74 Question Id : 70819111733 Question Type : MCQ Option Shuffling : Yes**

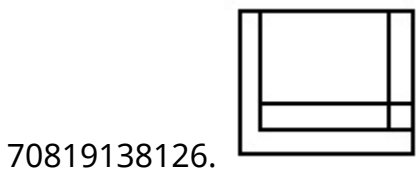
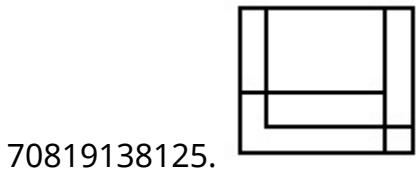
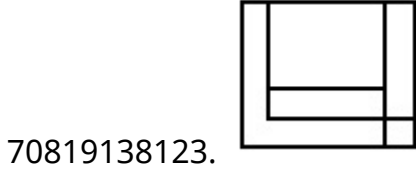
**Is Question Mandatory : No**

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

दिलेल्या त्रिपरिमाणित (3-डी) आकृतीकडे बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन ओळखा.



Options :

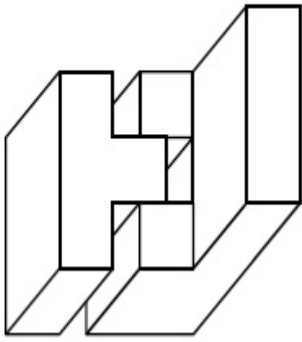


Question Number : 75 Question Id : 70819111734 Question Type : MCQ Option Shuffling : Yes

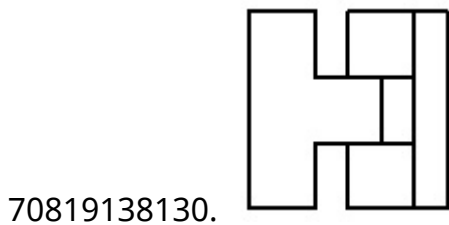
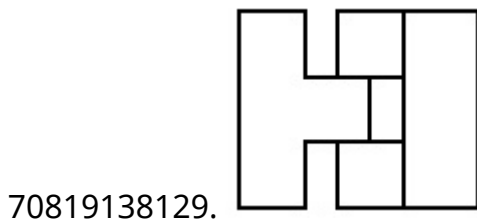
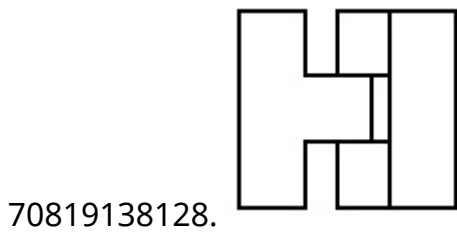
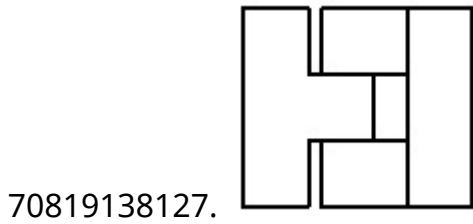
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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



Options :

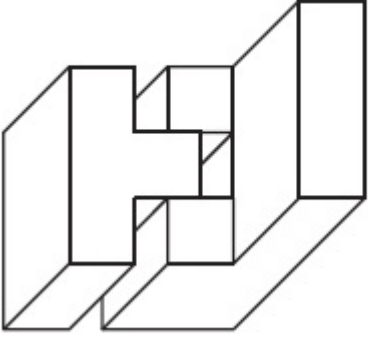


Question Number : 75 Question Id : 70819111734 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

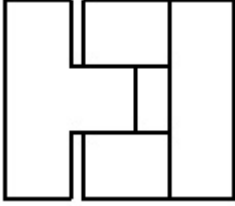
Correct Marks : 4 Wrong Marks : 1

दिलेल्या त्रिपरिमाणित (3-डी) आकृतीचा योग्य नकाशा उत्तर आकृती मधून निवडा.

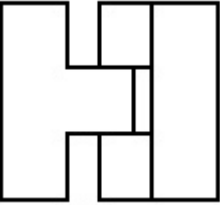


Options :

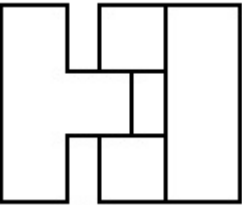
70819138127.



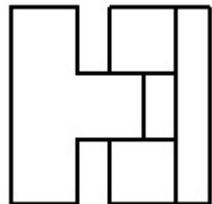
70819138128.



70819138129.



70819138130.

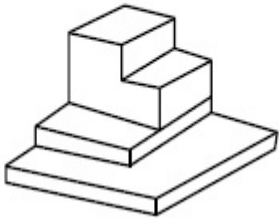


Question Number : 76 Question Id : 7081911735 Question Type : MCQ Option Shuffling : Yes

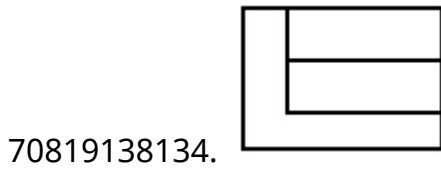
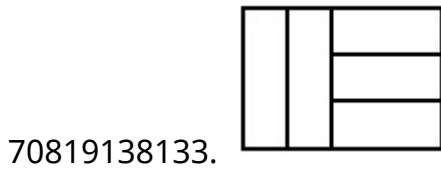
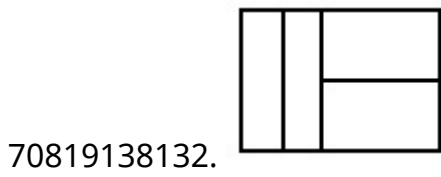
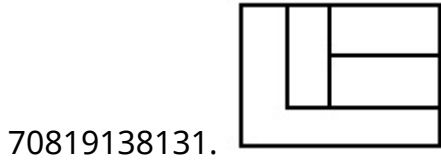
Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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



Options :

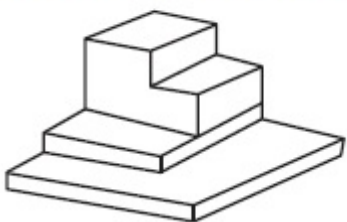


Question Number : 76 Question Id : 70819111735 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

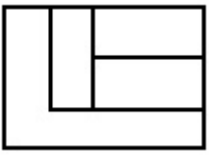
दिलेल्या त्रिपरिमाणित (३-डी) आकृतीचा योग्य नकाशा उत्तर आकृती मधून निवडा.



Options :

70819138131.

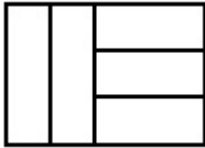




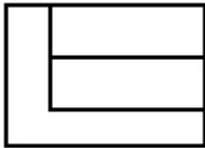
70819138132.



70819138133.



70819138134.

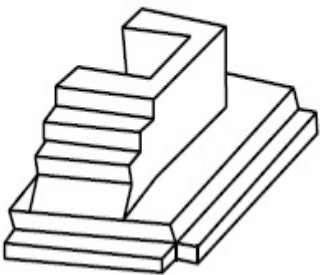


**Question Number : 77 Question Id : 70819111736 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

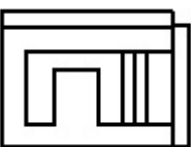
**Correct Marks : 4 Wrong Marks : 1**

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

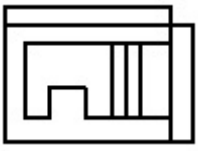


**Options :**

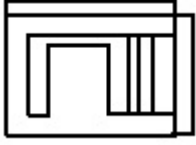
70819138135.



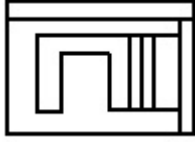
70819138136.



70819138137.



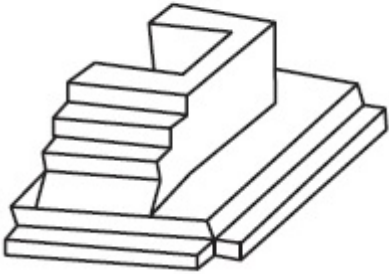
70819138138.



**Question Number : 77 Question Id : 70819111736 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No**

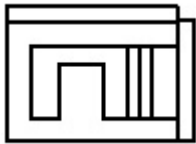
**Correct Marks : 4 Wrong Marks : 1**

दिलेल्या त्रिपरिमाणित (3-डी) आकृतीचा योग्य नकाशा उत्तर आकृती मधून ओळखा.

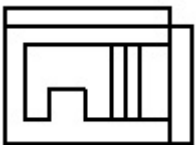


**Options :**

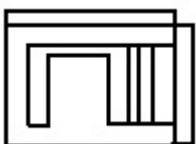
70819138135.



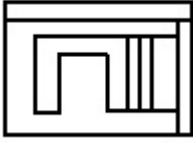
70819138136.



70819138137.



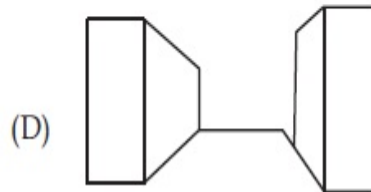
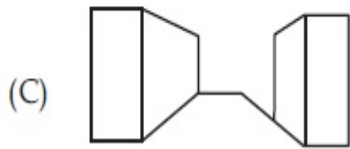
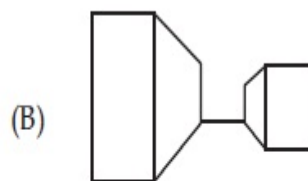
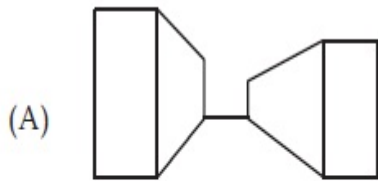
70819138138.



**Question Number : 78 Question Id : 70819111737 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No**

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

Identify the building compositions of having less visual tension amongst the following figures.



**Options :**

70819138139. (A) and (B)

70819138140. (B) and (C)

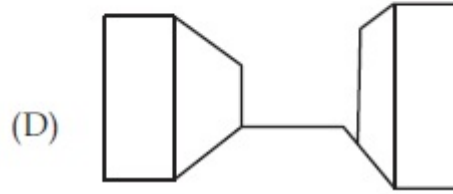
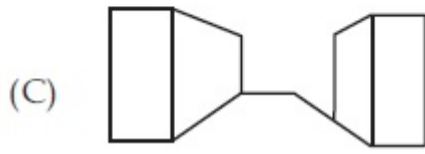
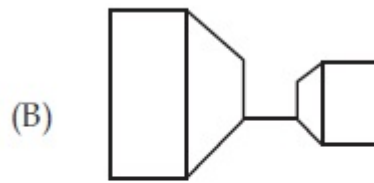
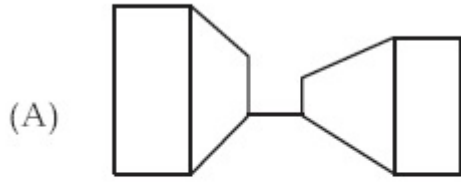
70819138141. (C) and (D)

70819138142. (D) and (A)

**Question Number : 78 Question Id : 70819111737 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No**

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

दिलेल्या पर्यायामधील कोणत्या इमारत रचनेमध्ये कमी तनाव निदर्शनास येतो.



**Options :**

70819138139. (A) आणि (B)

70819138140. (B) आणि (C)

70819138141. (C) आणि (D)

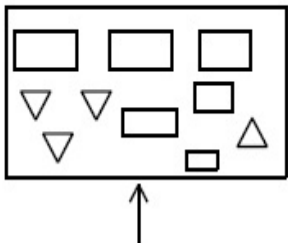
70819138142. (D) आणि (A)

**Question Number : 79 Question Id : 70819111738 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

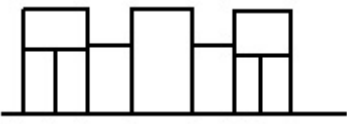
The problem figure shows the top view of an object. Identify the correct elevation amongst the answer figures looking in the direction of arrow.



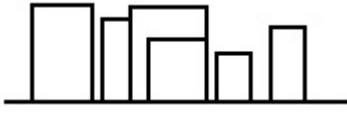
**Options :**



70819138144.



70819138145.



70819138146.

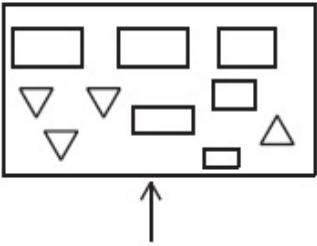


**Question Number : 79 Question Id : 70819111738 Question Type : MCQ Option Shuffling : Yes**

**Is Question Mandatory : No**

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

दिलेल्या प्रश्न आकृती मधील नकाशाकडे बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन निवडा.

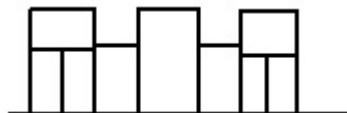


**Options :**

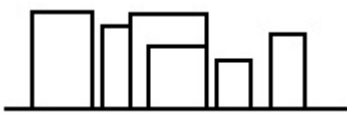
70819138143.



70819138144.



70819138145.



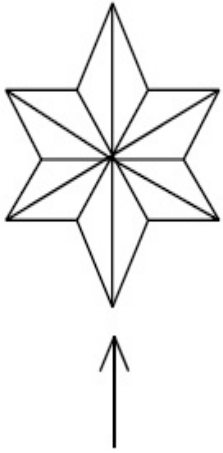
70819138146.



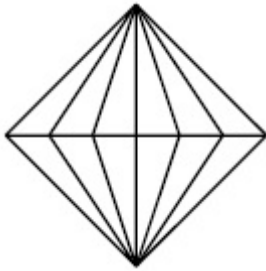
**Question Number : 80 Question Id : 70819111739 Question Type : MCQ Option Shuffling : Yes  
Is Question Mandatory : No**

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

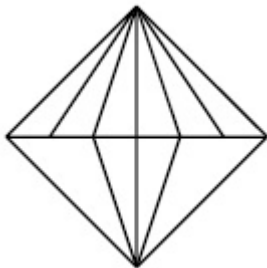
The problem figure shows the top view of an object. Identify the correct elevation amongst the answer figures looking in the direction of arrow.



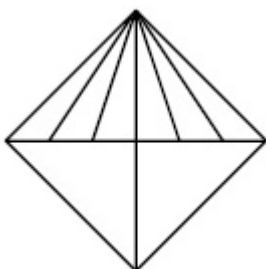
**Options :**



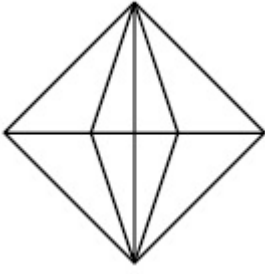
70819138147.



70819138148.



70819138149.



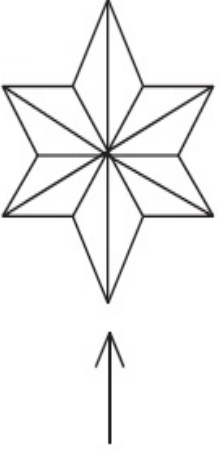
70819138150.

**Question Number : 80 Question Id : 70819111739 Question Type : MCQ Option Shuffling : Yes**

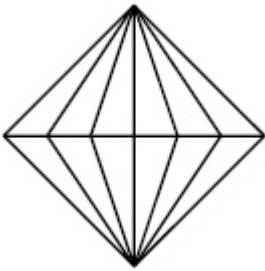
**Is Question Mandatory : No**

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

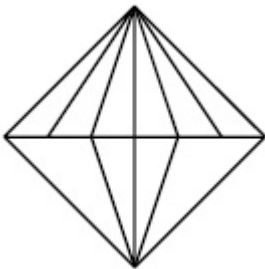
दिलेली प्रश्न आकृती ही एक नकाशा/वरील दृश्य दर्शविते. बाणाच्या दिशेने पहाता मिळणारे योग्य आरेखन ओळखा.



**Options :**

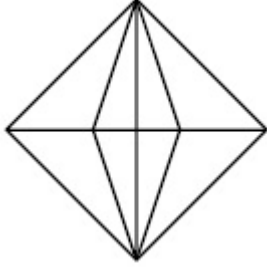
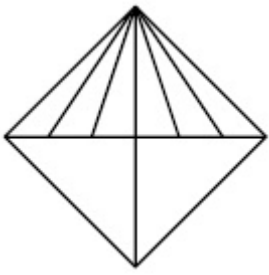


70819138147.



70819138148.

70819138149.



70819138150.

## Drawing

<b>Section Id :</b>	708191400
<b>Section Number :</b>	4
<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>Mark As Answered Required? :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	708191680
<b>Question Shuffling Allowed :</b>	No

**Question Number : 81 Question Id : 70819111740 Question Type : SUBJECTIVE**

**Correct Marks : 50**



Draw a proportionate sketch of given reference image by using any black and white rendering techniques of your own choice.

OR

Decode image and prepare balanced composition in a frame of your choice by using any black and white rendering techniques.



**Question Number : 81 Question Id : 70819111740 Question Type : SUBJECTIVE**

**Correct Marks : 50**

तुमच्या पसंतीची कोणतीही कृष्णधवल छायांकन कला वापरून दिलेल्या चित्राचे संतुलित रेखाटन साधा.

किंवा

तुमच्या पसंतीच्या चौकटीमध्ये कृष्णधवल छायांकन कला वापरून दिलेल्या चित्राचे सांकेतिक उकलन (डीकोडींग) करून संतुलित आकाररचना बनवा.



**Question Number : 82 Question Id : 70819111741 Question Type : SUBJECTIVE**

**Correct Marks : 50**

Draw a scene of a Kite festival by using colors.

**OR**

Draw a Harmonic three dimensional composition with the following two types of objects.

(i) CUBOID A : SIZE  $2\text{ cm} \times 2\text{ cm} \times 2\text{ cm}$ , 5 Nos.

(ii) CUBOID B : SIZE  $5\text{ cm} \times 2\text{ cm} \times 2\text{ cm}$ , 4 Nos.

Use 'Cool Colorscheme' for composition.

**Question Number : 82 Question Id : 70819111741 Question Type : SUBJECTIVE**

**Correct Marks : 50**

रंगांचा वापर करून 'पतंग उत्सवाचे' दृश्य रेखाटा.

**किंवा**

खाली दिलेल्या दोन प्रकारच्या वस्तु वापरून सुंदर त्रिपरिमाणीत (3-डी) रचना साधा.

(i) ठोकळा अ : आकारमान  $2\text{ से.मी.} \times 2\text{ से.मी.} \times 2\text{ से.मी.}$  5 नग.

(ii) ठोकळा ब : आकारमान  $5\text{ से.मी.} \times 2\text{ से.मी.} \times 2\text{ से.मी.}$  4 नग.

शीत रंगसंगती चा वापर करा.