National Testing Agency

Question Paper Name :	JEE Main 2023 Paper 2A (B.Arch) Jan 28 Single sitting
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Paper 2A (B.Arch)

Group Id :	71550529

Mathematics Section A

Section Number :	1
Number of Questions :	20
Number of Questions to be attempted :	20
Section Marks :	80

Question Number : 1 Question Id : 7155052569 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let R_1 and R_2 be two relations on $\mathbb{R}^2$ defined as

$(a, b)\ R_1\ (c, d)$ if $ad - bc \geq 0$

$(a, b)\ R_2\ (c, d)$ if $a + d \geq b + c$. Then :

Options :

7155058081. R_1 is transitive but R_2 is not transitive

7155058082. R_2 is transitive but R_1 is not transitive

7155058083. Both R_1 and R_2 are transitive

7155058084. Neither R_1 nor R_2 is transitive

Question Number : 2 Question Id : 7155052570 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let α and β be the roots of $x^2 - 3x + 9 = 0$. Then $\left(\frac{\beta^{30}}{(9\alpha)^{10}} + \frac{\alpha^{30}}{(9\beta)^{10}}\right)^2$ is equal to

Options :

7155058085. 1

7155058086. $\frac{1}{9}$

7155058087. 3

7155058088. 9

Question Number : 3 Question Id : 7155052571 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

For $z = 2 + 5i$, the modulus of $2z^3 + 21z^2 - 58z + 4$ is :

Options :

7155058089. 1153

7155058090. 947

7155058091. 537

7155058092. 837

Question Number : 4 Question Id : 7155052572 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If the system of equations

$$Kx - \sqrt{2}y + \sqrt{5}z = \sqrt{7}$$

$$\sqrt{5}x + \sqrt{3}y - \sqrt{2}z = \sqrt{11}$$

$$30x + (3\sqrt{15} - 5\sqrt{6})y + (5\sqrt{15} - 3\sqrt{10})z = 5\sqrt{21} + 3\sqrt{55}$$

has infinitely many solutions, then K^2 is

Options :

7155058093. 27

7155058094. $\frac{1}{3}$

7155058095. 9

7155058096. 3

Question Number : 5 Question Id : 7155052573 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

For $\alpha, \beta \in \mathbb{R}$, if the matrices $A = \begin{pmatrix} \alpha & 0 \\ 0 & \beta \end{pmatrix}$, $B = \begin{pmatrix} \alpha & 0 \\ 0 & \alpha \end{pmatrix}$ and $I = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$ satisfy the equation $(A * B) * 2I = 20I$, where $*$ is defined as $A * B = A^2 + B^2$, then $|\alpha\beta|$ is equal to :

Options :

7155058097. $2\sqrt{3}$

7155058098. $2\sqrt{2}$

7155058099. 4

7155058100. 2

Question Number : 6 Question Id : 7155052574 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The sum of the first eleven terms of the series is $\frac{1}{1+1^2+1^4} + \frac{2}{1+2^2+2^4} + \frac{3}{1+3^2+3^4} + \ldots$

Options :

7155058101. $\frac{61}{133}$

7155058102. $\frac{66}{133}$

7155058103. $\frac{16}{33}$

7155058104. $\frac{33}{67}$

Question Number : 7 Question Id : 7155052575 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

$\lim_{x\to 0}(1+3x)^{\frac{x+2}{x}}$ is equal to

Options :

7155058105. e

7155058106. e^3

7155058107. e^6

7155058108. e^9

Question Number : 8 Question Id : 7155052576 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let $P(\alpha,\beta,\lambda)$ be the image of the point Q(1,2,0) in the line $\frac{x-5}{3}=\frac{y-12}{1}=\frac{z-10}{2}$, then $(PQ)^2$ is equal to

Options :

7155058109. 90

7155058110. 180

7155058111. 360

7155058112. 270

Question Number : 9 Question Id : 7155052577 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

A box contains 7 red and 9 white balls.The number of ways of drawing 8 balls such that there are at least three balls of each colour, is :

Options :

7155058113. 8820

7155058114. 10584

7155058115. 1764

7155058116. 3515

Question Number : 10 Question Id : 7155052578 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let [t] denote the greatest integer function. If $\int_0^1 \left[1+x^2+x^4\right]dx = a$, then $36a-25a^2+8a^3-a^4$ is equal to

Options :

7155058117. 19

7155058118. -19

7155058119. 18

7155058120. -21

Question Number : 11 Question Id : 7155052579 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let PL = 8 units and QM = 2 units be two parallel line segments such that the line segments PM and QL intersect at the point R. If PL and QM are tangents to a circle passing through points P, Q, R then radius of this circle is

Options :

7155058121. $\sqrt{2}$

7155058122. 2

7155058123. $2\sqrt{2}$

7155058124. 4

Question Number : 12 Question Id : 7155052580 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

For some $\alpha \in \mathbb{N}$, let PQR be a triangle with two fixed vertices P(2, 5) and Q(α, –11). If the point R moves on the line l_1: $9x + 7y + \alpha = 0$, then the centroid of ΔPQR moves on the line l_2, which is parallel to l_1 at a distance $\frac{20}{3\sqrt{130}}$ units from it. If the distance of Q from l_2 is $\frac{k}{3\sqrt{130}}$, then k is equal to :

Options :

7155058125. 117

7155058126. 129

7155058127. 131

7155058128. 133

Question Number : 13 Question Id : 7155052581 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let $A_i(x_i, y_i)$, i = 1,2,3 be points on the circle $x^2 + y^2 = 10$ such that A_1 lies in the 1st quadrant and it is the image of point A_2 with respect to y-axis. If the distance of point A_1 from each of the points A_2 and A_3 is 2, then twenty times the area of the $\Delta A_1 A_2 A_3$ is

Options :

7155058129. 12

7155058130. 30

7155058131. 24

7155058132. 48

Question Number : 14 Question Id : 7155052582 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The remainder when 7^{89} is divided by 15 is

Options :

7155058133. 5

7155058134. 7

7155058135. 9

7155058136. 11

Question Number : 15 Question Id : 7155052583 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If the plane $y = \alpha x - \beta z + \gamma$ passing through the point $(1, -1, 3)$ is perpendicular to each of the planes $2x + y + z = 1$ and $3x - 2y + 2z = 0$, then $\alpha + \beta + \gamma$ is equal to :

Options :

7155058137. 5

7155058138. 13

7155058139. 19

7155058140. 27

Question Number : 16 Question Id : 7155052584 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let $\vec{a}=\hat{i}+2\hat{j}+3\hat{k}, \vec{b}=\hat{i}-\hat{j}+2\hat{k}, \vec{c}=2\hat{i}+\hat{j}-4\hat{k}$ be three vectors. If $\vec{r}$ is the vector such that $\vec{r}\times\vec{a}=\left(\vec{b}+\vec{c}\right)\times\vec{a}$ and $\vec{r}\cdot\left(\vec{b}-\vec{c}\right)=0$, then $\vec{r}\cdot\left(\hat{i}+\hat{j}-\hat{k}\right)$ is equal to :

Options :

7155058141. 3

7155058142. 4

7155058143. 5

7155058144. 6

Question Number : 17 Question Id : 7155052585 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The probability that a randomly selected root of the equation $1 + x + x^2 + ... + x^{118} = 0$ satisfies the equation $x^7 = 1$, is

Options :

7155058145. 0

7155058146. $\frac{1}{59}$

7155058147. $\frac{3}{59}$

7155058148. $\frac{7}{118}$

Question Number : 18 Question Id : 7155052586 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let X have the binomial distribution B(n, p). If its mean is 3 and variance is 2, then $P(X < \frac{n}{4})$ is equal to :

Options :

7155058149. $\frac{29\times 2^8}{3^9}$

7155058150. $\frac{25\times 2^9}{3^9}$

7155058151. $\frac{163}{3^9}$

7155058152. $\frac{835}{3^9}$

Question Number : 19 Question Id : 7155052587 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The domain of the function $f(x)=\cos^{-1}\left(\frac{x^2-3x+2}{x^2+2x-1}\right)$ is :

Options :

7155058153. $\left(\sqrt{2}-1, \frac{3}{5}\right]$

7155058154. $\left[\frac{3}{5}, \infty\right)$

7155058155. $\mathbb{R}-\{-\sqrt{2}-1,\ \sqrt{2}-1\}$

7155058156. $(-\infty, -1-\sqrt{2}) \cup (\sqrt{2}-1, \infty)$

Question Number : 20 Question Id : 7155052588 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which of the following statements is a tautology ?

Options :

7155058157. $((p \Rightarrow q) \vee p) \Rightarrow q$

7155058158. $((p \wedge q) \Rightarrow p) \Rightarrow q$

7155058159. $((p \wedge q) \wedge (\sim q)) \Rightarrow p$

7155058160. $((p \Rightarrow q) \vee p) \Rightarrow p$

Mathematics Section B

Section Number : 2
Number of Questions : 10
Number of Questions to be attempted : 5
Section Marks : 20

Question Number : 21 Question Id : 7155052589 Question Type : SA Correct Marks : 4 Wrong Marks : 1

The curve $y = x^2 + 1$ divides the area enclosed by the curves $y + |x| = 3$ and $y = |x-1|$ in the ratio m : n , where m and n are coprime, then m + n is equal to _____ .

Question Number : 22 Question Id : 7155052590 Question Type : SA Correct Marks : 4 Wrong Marks : 1

The number of ways in which 30 identical pens can be distributed among 12 students so that each student gets at least one pen and exactly two students get at least two pens each, is _____.

Question Number : 23 Question Id : 7155052591 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let $\left(1+x^2-x^4\right)^{12} = \sum_{n=0}^{48} a_n x^n$. Then $a_0 + a_2 + a_4 + ... + a_{44}$ is equal to

Question Number : 24 Question Id : 7155052592 Question Type : SA Correct Marks : 4 Wrong Marks : 1

If S_n denotes the sum of first n terms of the series $7 + 10 + 16 + 25 + 37 + ...$, then $S_{30} - S_{20}$ is equal to _____.

Question Number : 25 Question Id : 7155052593 Question Type : SA Correct Marks : 4 Wrong Marks : 1

If [t] denotes the greatest integer $\le$ t, then the number of points , at which the function $f(x)=\left[x+x^3\right]+\left|x-x^3\right|+\left|x+\frac{1}{2}\right|$ is not differentiable in the open interval (–10, 10), is _____.

Question Number : 26 Question Id : 7155052594 Question Type : SA Correct Marks : 4 Wrong Marks : 1

If $\int \frac{dx}{(3x^2+5)\sqrt{10x^2+7}} = -\frac{1}{\sqrt{580}} \log_e |f(x)| + C$ where C is an arbitrary constant, then $f(0)$ is equal to

Question Number : 27 Question Id : 7155052595 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let the equation of the hyperbola with foci (1, 5), (1, –1) and eccentricity $\sqrt{3}$ be $x^2 - 2y^2 + ax + by + c = 0$. Then $|a + b + c|$ is equal to _____.

Question Number : 28 Question Id : 7155052596 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let α_1, α_2 be the values of α such that the distance between the point (2, 4, 3) and the plane $3x + y + \alpha z + 10 = 0$ is $\sqrt{35}$ units. Then the area of the triangle with vertices $(\alpha_1, \alpha_2, 0)$, $(\alpha_2, \alpha_1, 0)$ and $\left(\frac{164}{13}, 5, 0\right)$ is _____ unit^2.

Question Number : 29 Question Id : 7155052597 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let O be the origin and let the vectors $\overrightarrow{OA} = -3\hat{i} + 7\hat{j} + 5\hat{k}$, $\overrightarrow{OB} = -5\hat{i} + 7\hat{j} - 3\hat{k}$ and $\overrightarrow{OC} = \hat{u}$ represent three sides of a parallelopiped, where $\hat{u}$ is a unit vector in the xy- plane. If the maximum volume of the parallelopiped is $2\sqrt{\alpha}$, then α is equal to _____.

Question Number : 30 Question Id : 7155052598 Question Type : SA Correct Marks : 4 Wrong Marks : 1

If the solution curve of the differential equation $\frac{x+y-2}{x+y-1}\frac{dy}{dx} = \frac{x+y+2}{x+y+1}$, $x + y > 2$ passes through the points $\left(\sqrt{2}, \sqrt{2}\right)$ and $(2, \alpha)$, then $2\alpha - \log_e\left(\frac{\alpha^2+4\alpha+2}{6}\right)$ is equal to _____ .

Aptitude Test

Section Number : 3
Number of Questions : 50
Number of Questions to be attempted : 50
Section Marks : 200

Question Number : 31 Question Id : 7155052599 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Adobe is a

Options :

7155058171. Type of cement

7155058172. Type of floor finish

7155058173. Type of paint

7155058174. Type of Brick

Question Number : 32 Question Id : 7155052600 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I : Chandigarh is the first planned city of Independent India

Statement II : Chandigarh city was designed by Swiss French architect Le Corbusier

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

Options :

7155058175. Both Statement I and Statement II are correct

7155058176. Both Statement I and Statement II are incorrect

7155058177. Statement I is correct but statement II is incorrect

7155058178. Statement I is incorrect but statement II is correct

Question Number : 33 Question Id : 7155052601 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I : Glass has low thermal conductivity

Statement II : Glass can absorb, refract and transmit light.

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

Options :

7155058179. Both Statement I and Statement II are correct

7155058180. Both Statement I and Statement II are incorrect

7155058181. Statement I is correct but statement II is incorrect

7155058182. Statement I is incorrect but statement II is correct

Question Number : 34 Question Id : 7155052602 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match List I with List II

LIST I		LIST II	
A.	PMUY	I.	KAUSHAL VISKAS YOJNA
B.	PMAY	II.	JAN DHAN YOJANA
C.	PMKVY	III.	UJJWALA YOJANA
D.	PMJDY	IV.	AWAS YOJANA

Choose the correct answer from the options given below:

Options :

7155058183. A-I, B-III, C-II, D-IV

7155058184. A-III, B-IV, C-I, D-II

7155058185. A-IV, B-II, C-III, D-I

7155058186. A-IV, B-III, C-I, D-II

Question Number : 35 Question Id : 7155052603 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match List I with List II

LIST I		LIST II	
A.	CP Kukreja	I.	IIM Ahmedabad
B.	Louis I Kahn	II.	Jawahar Lal Nehru University
C.	B.V Doshi	III.	IIT Kanpur
D.	Achyut Kanvinde	IV.	IIM Bengaluru

Choose the correct answer from the options given below:

Options :

7155058187. A-IV, B-II, C-I, D-III

7155058188. A-III, B-I, C-II, D-IV

7155058189. A-II, B-I, C-IV, D-III

7155058190. A-I, B-IV, C-III, D-II

Question Number : 36 Question Id : 7155052604 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which one of these is not a complimentary colour?

Options :

7155058191. Blue-Orange

7155058192. Red-Green

7155058193. Blue-Green

7155058194. Violet-Yellow

Question Number : 37 Question Id : 7155052605 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

In which State of India, Robbers cave is situated:

Options :

7155058195. Himachal Pradesh

7155058196. Uttarakhand

7155058197. Uttar Pradesh

7155058198. Madhya Pradesh

Question Number : 38 Question Id : 7155052606 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Choose the correct option among the following:

Petronas Tower is situated in:

Options :

7155058199. Paris

7155058200. Dubai

7155058201. Kuala Lumpur

7155058202. New York

Question Number : 39 Question Id : 7155052607 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The Konark Temple is located in which state?

Options :

7155058203. Madhya Pradesh

7155058204. Odisha

7155058205. Karnataka

7155058206. Rajasthan

Question Number : 40 Question Id : 7155052608 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Who is the architect of the Lotus Temple?

Options :

7155058207. Louis I Kahn

7155058208. Mohse Safdi

7155058209. Fariborz Sahba

7155058210. Richard Meyer

Question Number : 41 Question Id : 7155052609 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

A small lift for carrying only a small load is known as:

Options :

7155058211. A dead Bearer

7155058212. A Dumb Waiter

7155058213. A Jockey Boy

7155058214. A push upper

Question Number : 42 Question Id : 7155052610 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which are often referred as 'twin cities' of Odisha?

Options :

7155058215. Bhubaneshwar-Puri

7155058216. Puri-Cuttack

7155058217. Bhubaneshwar-Cuttack

7155058218. Bhubaneshwar-Rourkela

Question Number : 43 Question Id : 7155052611 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which is the correct chronology of Human Civilizations in terms of their existence?

Options :

7155058219. Mesopotamia-Harappa-Egyptian-Chinese

7155058220. Mesopotamia-Egyptian-Harappa-Chinese

7155058221. Mesopotamia-Chinese-Harappa-Egyptian

7155058222. Egyptian-Mesopotamia-Harappa-Sumerian

Question Number : 44 Question Id : 7155052612 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Qutub-Minar in Delhi was built by:

Options :

7155058223. Shah Jahan

7155058224. Jahangir

7155058225. Akbar

7155058226. Qutub ud-din Aibak

Question Number : 45 Question Id : 7155052613 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which direction in the southern hemisphere would you get glare free (diffused) light throughout the year?

Options :

7155058227. North

7155058228. South

7155058229. East

7155058230. West

Question Number : 46 Question Id : 7155052614 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1
Who is the architect of the famous "Jawaharlal Kala Complex" in Jaipur?
Options :
7155058231. Raj Rewal

7155058232. Charles Correa

7155058233. Achyut Kanvinde

7155058234. Hafeez Contractor

Question Number : 47 Question Id : 7155052615 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1
Dhajji-Dewari is a construction style popular predominantly in _____.
Options :
7155058235. Coastal Areas

7155058236. Plains

7155058237. Mountainous Region

7155058238. Desert Areas

Question Number : 48 Question Id : 7155052616 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1
Which stone is used for roofing in mountainous regions?
Options :
7155058239. Marble

7155058240. Granite

7155058241. Shale

7155058242. Sand Stone

Question Number : 49 Question Id : 7155052617 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1
Chandigarh is an example of which type of city planning.
Options :
7155058243. Radio Centric

7155058244. Grid-iron

7155058245. Linear

7155058246. Organic

Question Number : 50 Question Id : 7155052618 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If you have to build on the seashore in Goa, which rooms would have the best view of the sea?

Options :

7155058247. Those facing North

7155058248. Those facing South

7155058249. Those facing East

7155058250. Those facing West

Question Number : 51 Question Id : 7155052619 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

"NIFT" National Institute of Fashion Technology, Delhi is designed by

Options :

7155058251. B.V Doshi

7155058252. C.P Kukreja

7155058253. Raj Rewal

7155058254. Bimal Patel

Question Number : 52 Question Id : 7155052620 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match List I with List II

LIST I		LIST II	
A.		I.	Empire state Building
B.		II.	Hagia Sophia
C.		III.	Sydney Opera House
D.		IV.	Colosseum

Choose the correct answer from the options given below:

Options :

7155058255. A-II, B-I, C-IV, D-III

7155058256. A-I, B-III, C-IV, D-II

7155058257. A-I, B-II, C-III, D-IV

7155058258. A-IV, B-III, C-II, D-I

Question Number : 53 Question Id : 7155052621 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match List I with List II

LIST I		LIST II	
A.		I.	Tesla
B.		II.	Ferrari
C.		III.	Porsche
D.		IV.	Toyota

Choose the correct answer from the options given below:

Options :

7155058259. A-IV, B-I, C-II, D-III

7155058260. A-II, B-III, C-I, D-IV

7155058261. A-III, B-II, C-I, D-IV

7155058262. A-IV, B-III, C-II, D-I

Question Number : 54 Question Id : 7155052622 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I : Red, Blue and Yellow are the primary colours of a colour wheel.

Statement II : The colours which are positioned opposite to each other in a colour wheel are known as complementary colours.

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

Options :

7155058263. Both Statement I and Statement II are correct

7155058264. Both Statement I and Statement II are incorrect

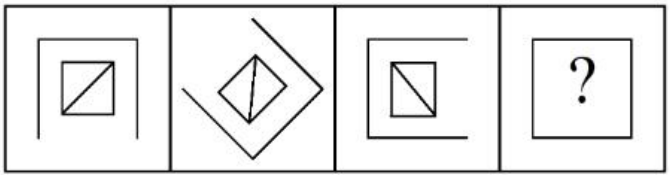
7155058265. Statement I is correct but statement II is incorrect

7155058266. Statement I is incorrect but statement II is correct

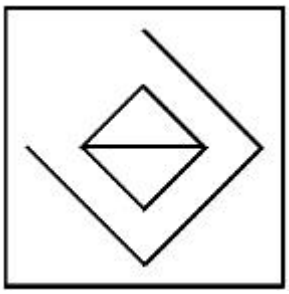
Question Number : 55 Question Id : 7155052623 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

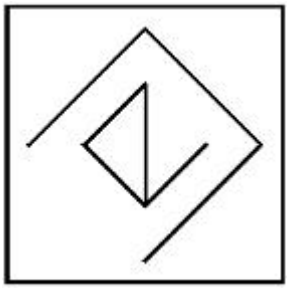
Following question consists of problem figures followed by answer figures. Select a figure from amongst the answer figures which will continue the same series or pattern as established by the problem figures.

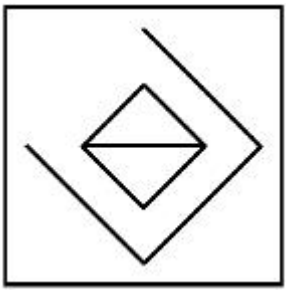
PROBLEM FIGURES

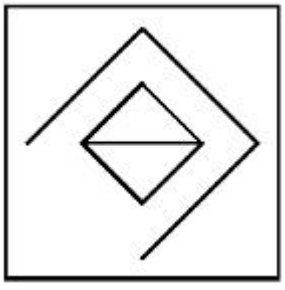


Options :

7155058267. 

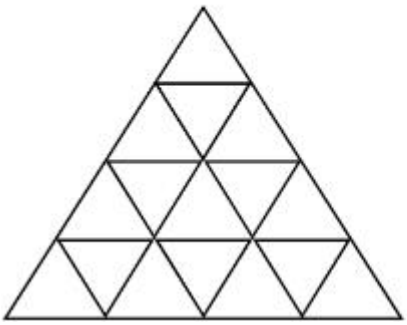
7155058268. 

7155058269. 

7155058270. 

Question Number : 56 Question Id : 7155052624 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

How many triangles are there in given figure:-



Options :

7155058271. 26

7155058272. 25

7155058273. 27

7155058274. 24

Question Number : 57 Question Id : 7155052625 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Find the odd one out:-

7, 9, 25, 32, 43, 59

Options :

7155058275. 59

7155058276. 32

7155058277. 25

7155058278. 9

Question Number : 58 Question Id : 7155052626 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

A residential building has 15 floors. The height of ground floor is 4.2 meter (including length and slab thickness). Rest all other floors are of 3.3 meter high (including slab thickness). What is the total height of the building (from ground to terrace) in meters?

Options :

7155058279. 45.6 meter

7155058280. 50 meter

7155058281. 50.4 meter

7155058282. 51.6 meter

Question Number : 59 Question Id : 7155052627 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the mirror image of the given word:-

SUCCESS

Options :

7155058283. SUCCESS

7155058284. SUCCESS

7155058285. SUCCESS

7155058286. SSECCUS

Question Number : 60 Question Id : 7155052628 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The scale of a map is 1:1000. If a car travels 7 cm from point 'A' to point 'B' on the Map. Then how much the car has travelled in original:-

Options :

7155058287. 0.7 km

7155058288. 7000 mm

7155058289. 7 km

7155058290. 70 meter

Question Number : 61 Question Id : 7155052629 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

A land size of 80 meter × 40 meter for a house design is drawn on paper at a scale of 1:100, then what size is drawn on paper to represent the land?

Options :

7155058291. 8 meter × 4 meter

7155058292. 80 meter × 40 meter

7155058293. 8 centimeter × 4 centimeter

7155058294. 4 meter × 2 meter

Question Number : 62 Question Id : 7155052630 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Find the missing number in given series.

16, 33, 65, 131, 261, (.....)

Options :

7155058295. 523

7155058296. 521

7155058297. 524

7155058298. 520

Question Number : 63 Question Id : 7155052631 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

In a code language if ROMAN is written as TQOCP: then ITALY is.....

Options :

7155058299. KVCMA

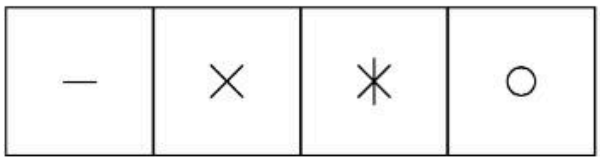
7155058300. KWCNB

7155058301. KUCLA

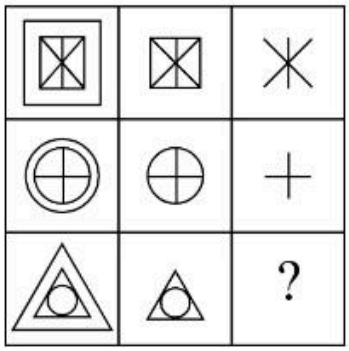
7155058302. KVCNA

Question Number : 64 Question Id : 7155052632 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Select a suitable figure from the four alternatives which will come in the empty box.



(A) (B) (C) (D)



Options :

7155058303. D

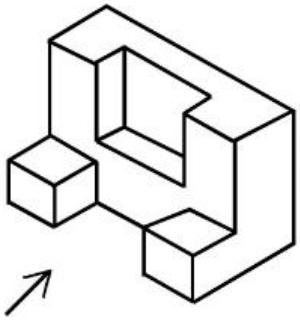
7155058304. C

7155058305. B

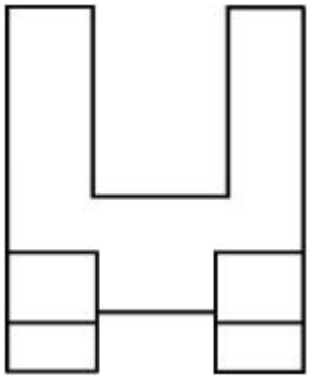
7155058306. A

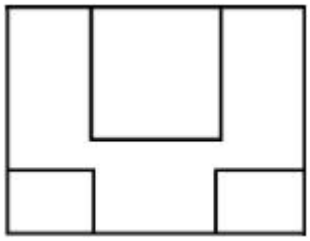
Question Number : 65 Question Id : 7155052633 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

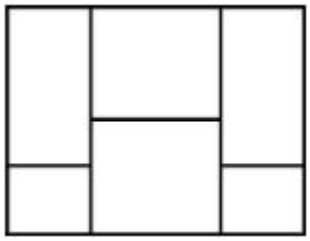
The 3D figure shows the view of an object. Looking in the direction of arrow, identify the most appropriate elevation from the given answer figures.

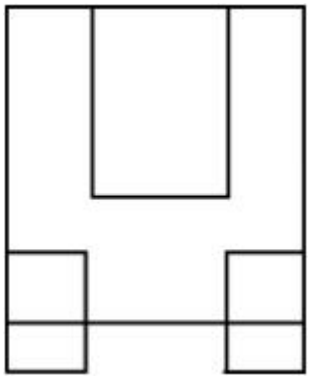


Options :

7155058307. 

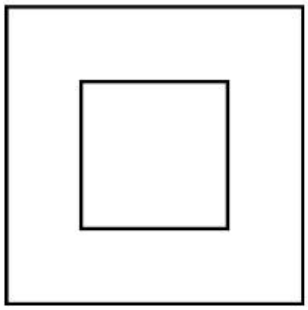
7155058308. 

7155058309. 

7155058310. 

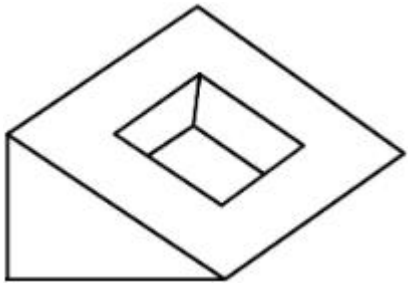
Question Number : 66 Question Id : 7155052634 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Question figure shows top view/ plan of an object. Identify the INCORRECT 3D view from the given answers figure.

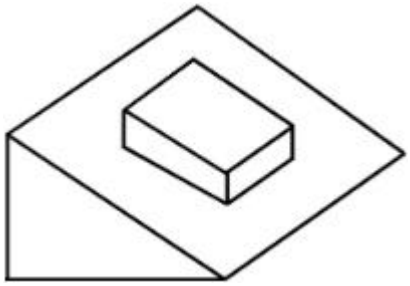


Options :

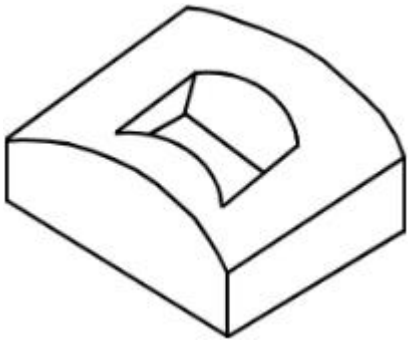
7155058311.



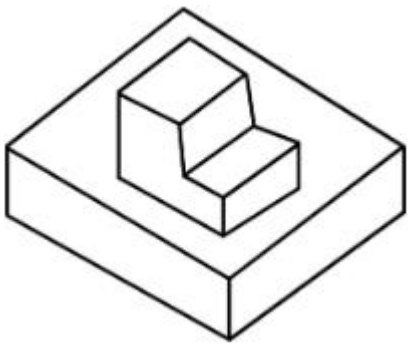
7155058312.



7155058313.

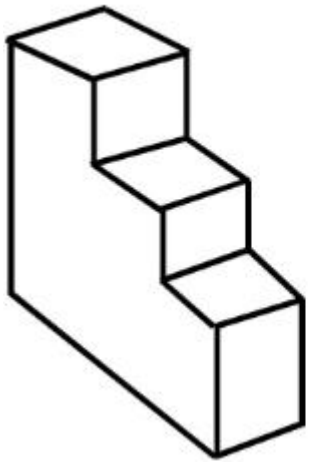


7155058314.



Question Number : 67 Question Id : 7155052635 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

How many surfaces does the object have?



Options :

7155058315. 9

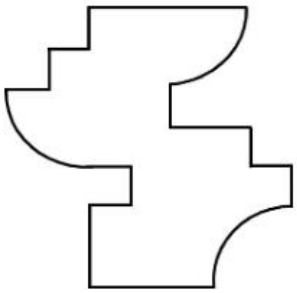
7155058316. 10

7155058317. 8

7155058318. 11

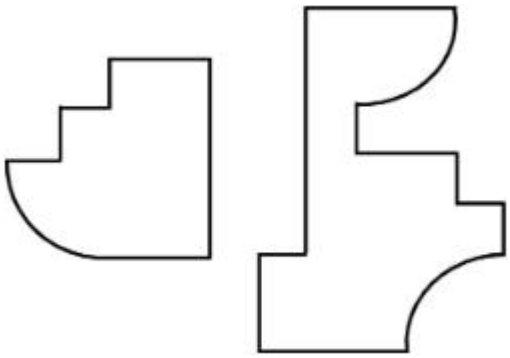
Question Number : 68 Question Id : 7155052636 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If the question figure is cut into two parts, which of the answer figures complete the question figure without any overlappings?

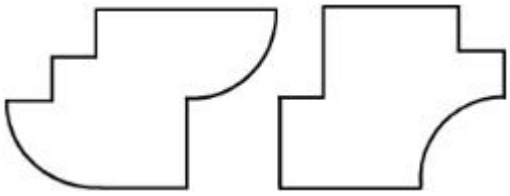


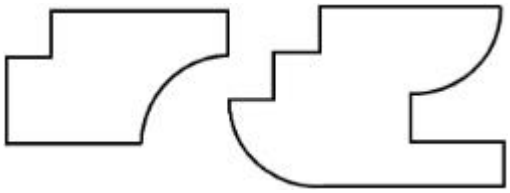
Options :

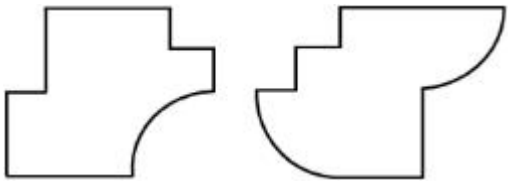
7155058319.



7155058320.

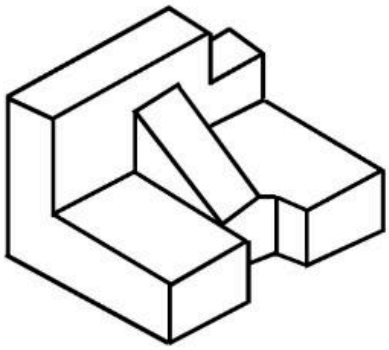


7155058321. 

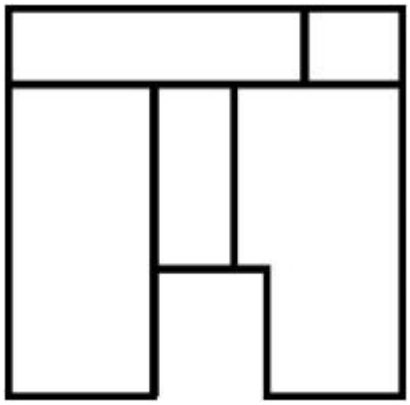
7155058322. 

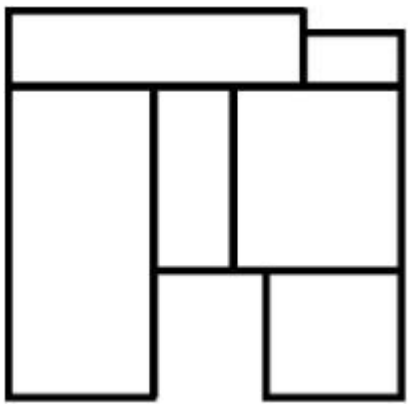
Question Number : 69 Question Id : 7155052637 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

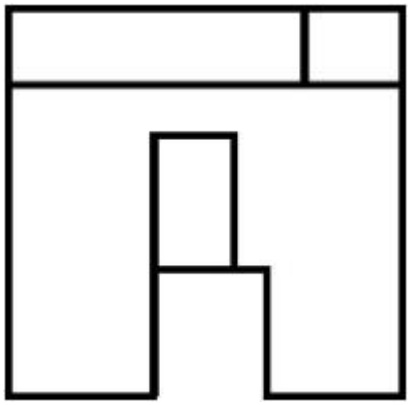
The 3D problem figure shows the view of an object. Identify its appropriate top view from the answer figures.

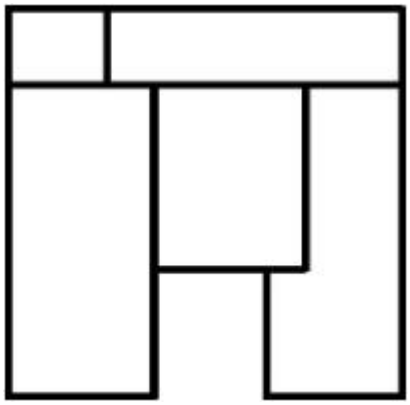


Options :

7155058323. 

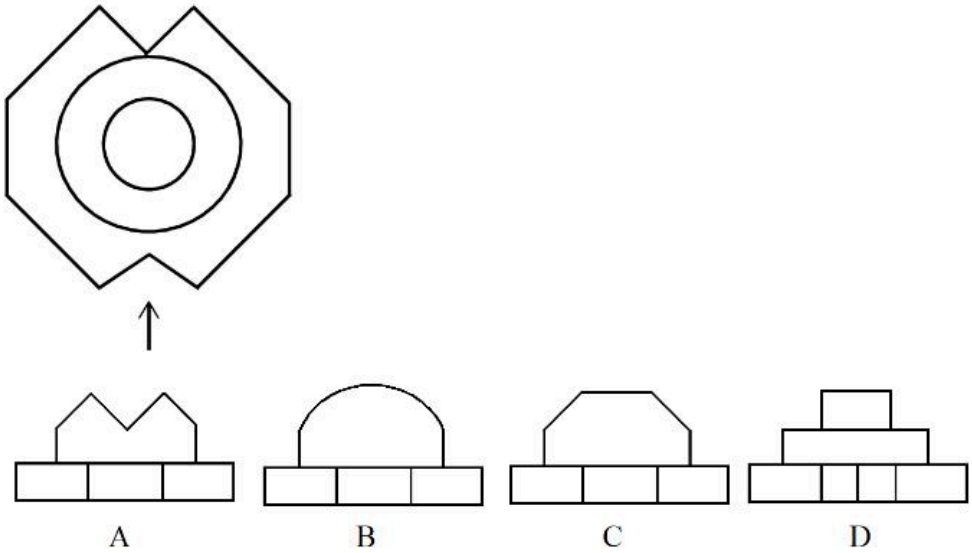
7155058324. 

7155058325. 

7155058326. 

Question Number : 70 Question Id : 7155052638 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the correct elevation when you look into the object from the marked arrow side of the plan of the object.



Options :

7155058327. D

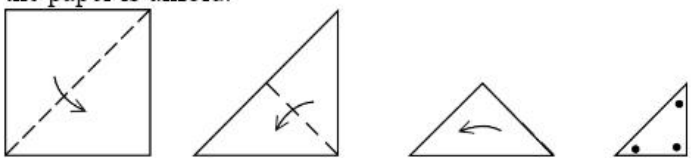
7155058328. A

7155058329. B

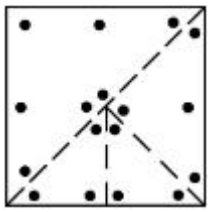
7155058330. C

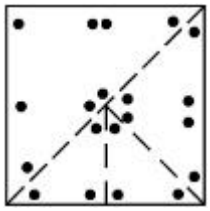
Question Number : 71 Question Id : 7155052639 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

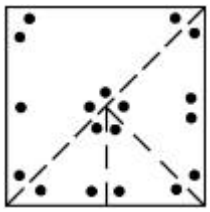
A paper is folded in a given pattern and it is cut at the end. Identify which pattern is formed when the paper is unfold.

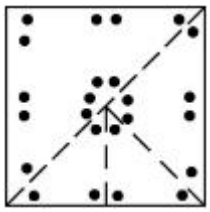


Options :

7155058331. 

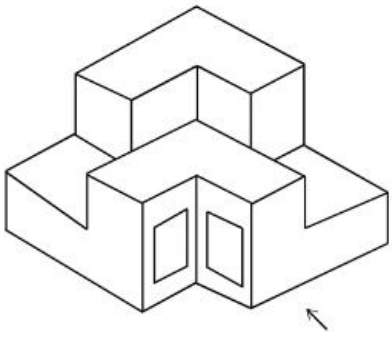
7155058332. 

7155058333. 

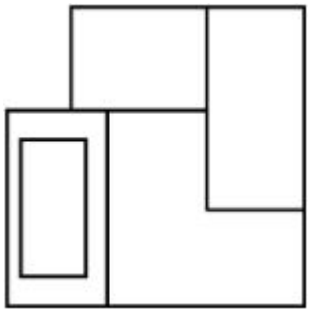
7155058334. 

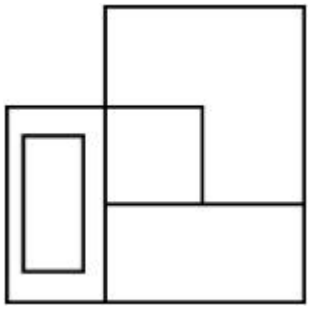
Question Number : 72 Question Id : 7155052640 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

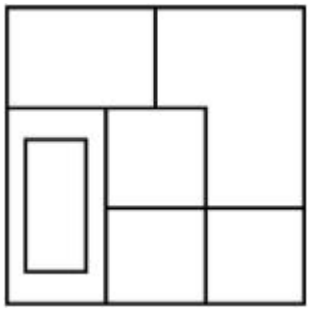
The question figure shows the 3-D view of an object. Identify the correct view, looking in the direction of arrow.

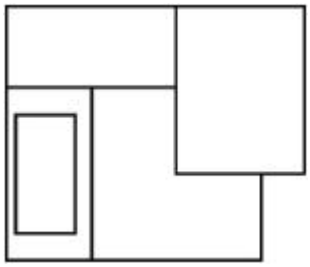


Options :

1. 

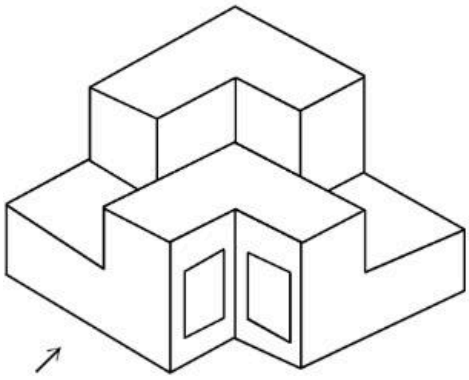
2. 

3. 

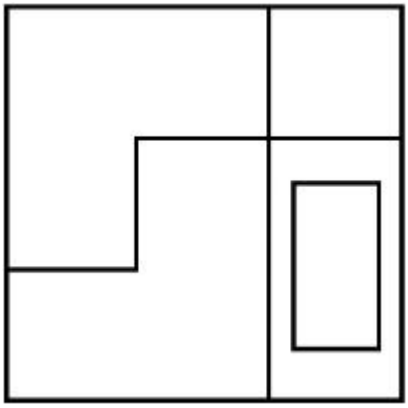
4. 

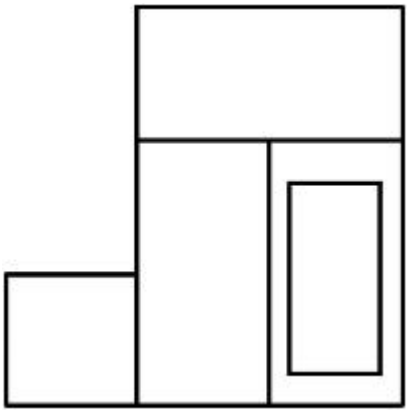
Question Number : 73 Question Id : 7155052641 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

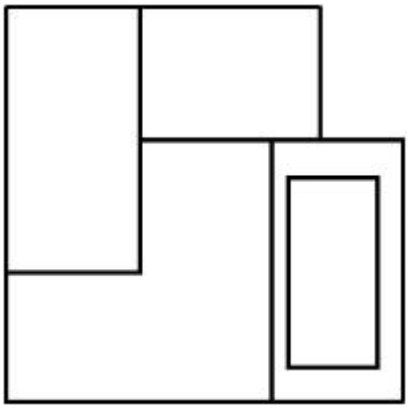
The question figure shows the 3-D view of an object. Identify the correct view, looking in the direction of arrow.

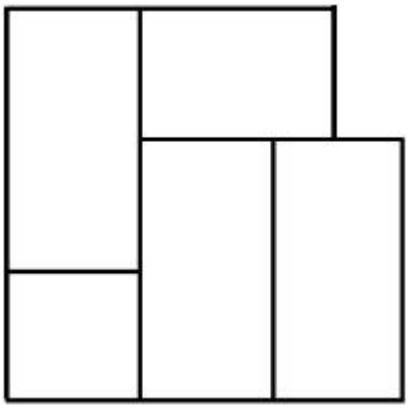


Options :

7155058339. 

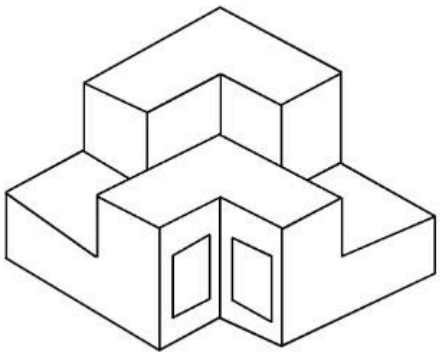
7155058340. 

7155058341. 

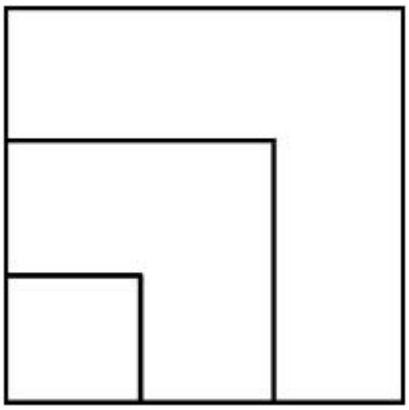
7155058342. 

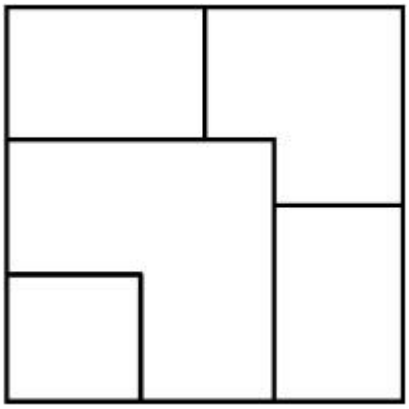
Question Number : 74 Question Id : 7155052642 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

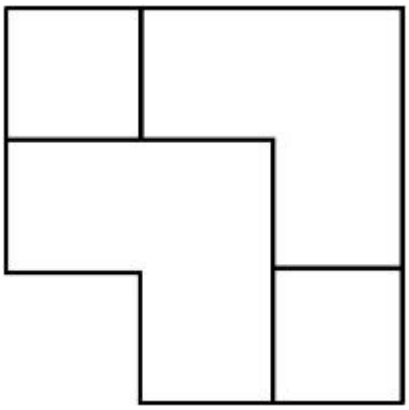
From the given options below, choose the correct plan of the 3-D object, when viewed from the top.

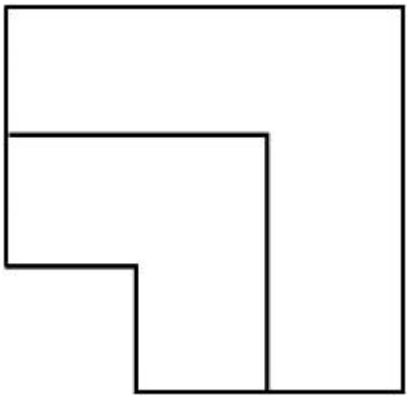


Options :

7155058343. 

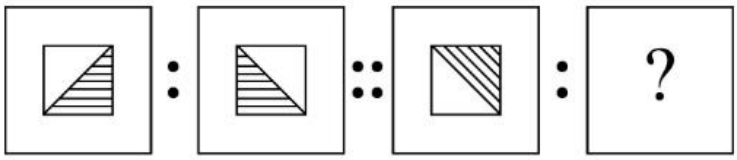
7155058344. 

7155058345. 

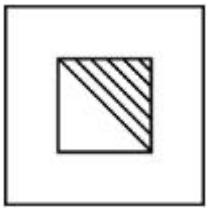
7155058346. 

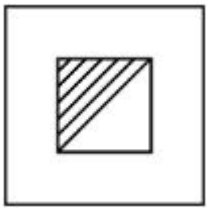
Question Number : 75 Question Id : 7155052643 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

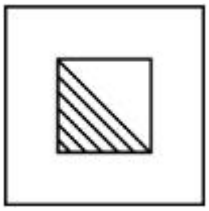
The second figure in the first part of the problem figures bears certain relationship to the first figure. Similarly, one of the figures of answer figures bears the same relationship to the first figure of the second part. Identify the correct option from the given answer figures.



Options :

7155058347. 

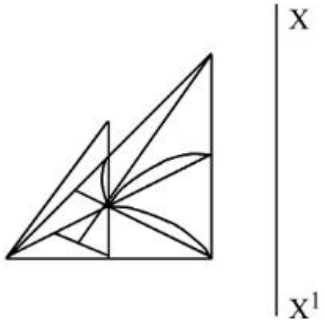
7155058348. 

7155058349. 

7155058350. 

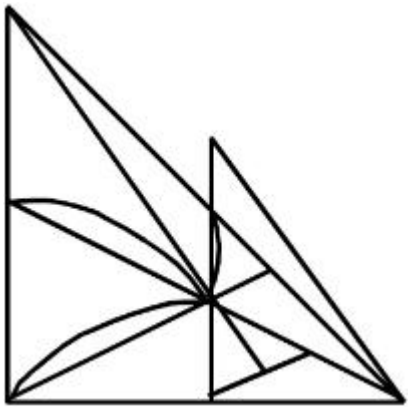
Question Number : 76 Question Id : 7155052644 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the true mirror image of the figure amongst the answer figures with respect to X-X

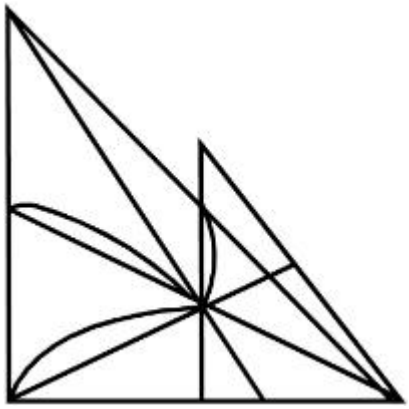


Options :

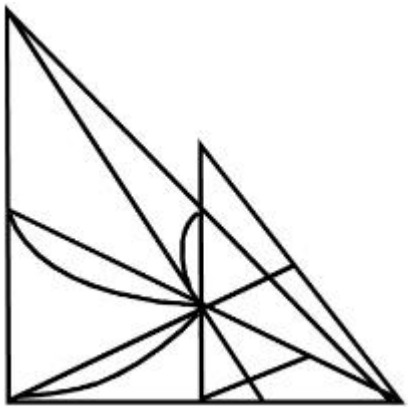
7155058351.

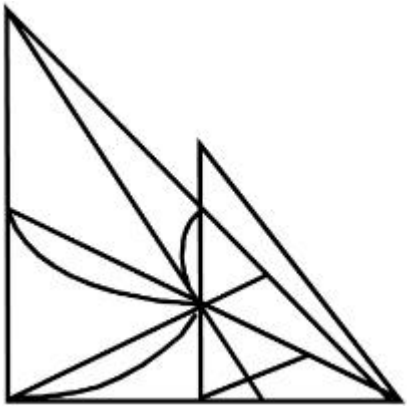


7155058352.



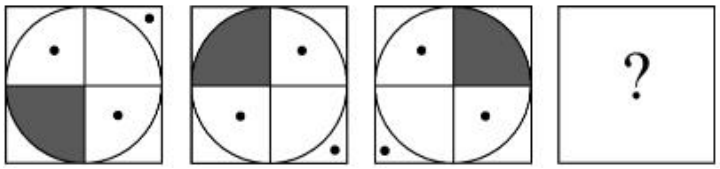
7155058353.



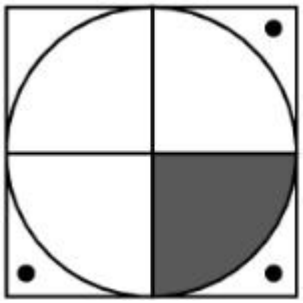
7155058354. 

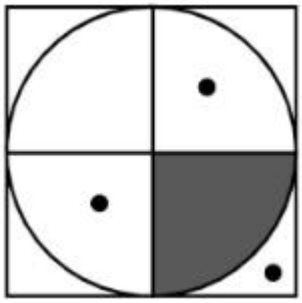
Question Number : 77 Question Id : 7155052645 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

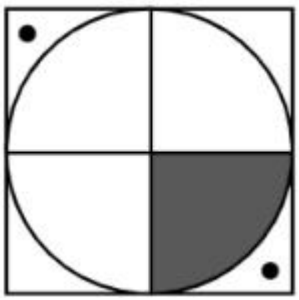
Choose the correct option amongst the answer figures which complete the series.

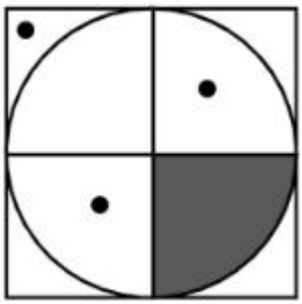


Options :

7155058355. 

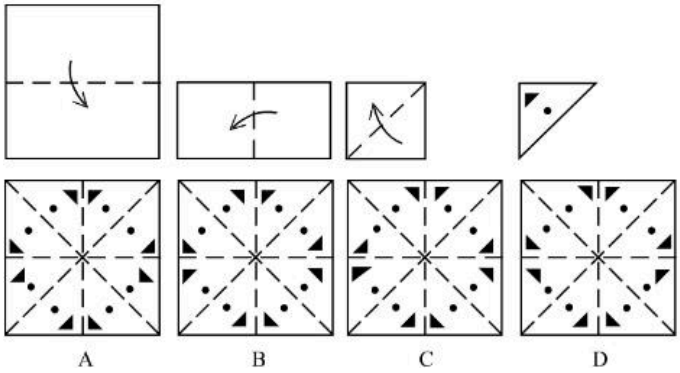
7155058356. 

7155058357. 

7155058358. 

Question Number : 78 Question Id : 7155052646 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Sheet is folded in marked format and cut led at last as shown. Identify from the options below, how the pattern will be made when it's fully unfold?



Options :

7155058359. B

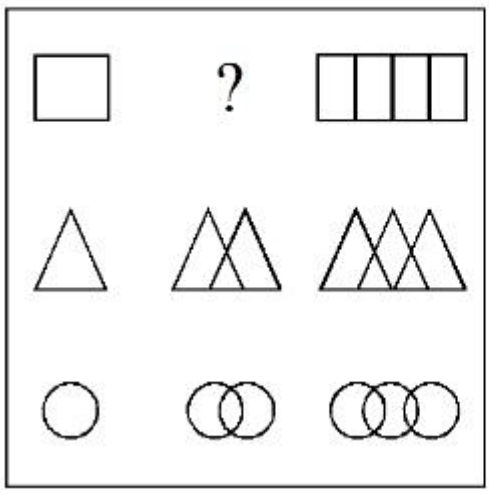
7155058360. A

7155058361. D

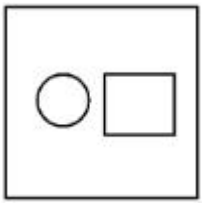
7155058362. C

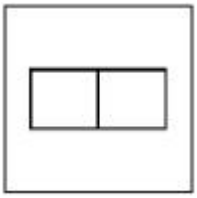
Question Number : 79 Question Id : 7155052647 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

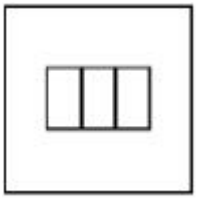
In the figure mentioned below find the missing series:-

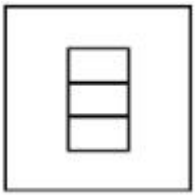


Options :

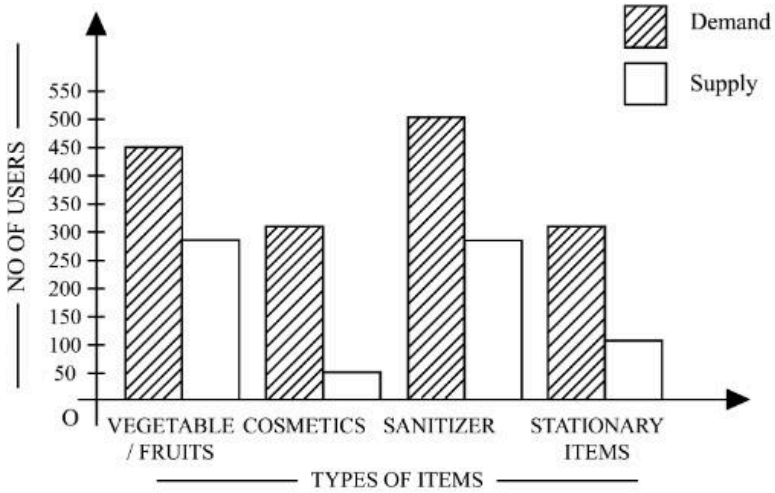
7155058363. 

7155058364. 

7155058365. 

7155058366. 

Question Number : 80 Question Id : 7155052648 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1



The diagram shows the supply and demand of different users for different items. Which of the following is/are correct?

A. Sanitizer only meet 50% of the demand
B. Cosmetics has the least supply among all.
C. Among all, two items have equal demand but difference in supply
D. Among all, two items have equal supply and two items have equal demand.

Choose the correct answer from the options given below:-

Options :

7155058367. B and D only

7155058368. A and B only

7155058369. A and C only

7155058370. B, C and D only

Drawing

Section Number :	4
Number of Questions :	2
Number of Questions to be attempted :	2
Section Marks :	100

Question Number : 81 Question Id : 7155052649 Question Type : SUBJECTIVE Correct Marks : 50 Wrong Marks : 0
Draw a proportionate sketch of given reference image. Use black and white rendering techniques of your choice.



Question Number : 82 Question Id : 7155052650 Question Type : SUBJECTIVE Correct Marks : 50 Wrong Marks : 0
Use the basic 2D shapes found in a motor cycle and create an interesting 2D composition of your choice, colour with any three colours of your choice.