National Testing Agency

Question Paper Name :	JEE Main 2020 Paper 2A (B.Arch) Sep 1 Shift 1
Subject Name :	Paper 2A (B.Arch)
Creation Date :	2020-09-01 17:10:16
Duration :	180
Total Marks :	400

Paper 2A (B.Arch)

Group Id : 40503696

Mathematics

Section Number :	1
Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	100

Question Number : 1 Question Id : 4050369074 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let a function, $f : \mathbf{R} \to \mathbf{R}$ be defined by

$f(x) = 1 + x|x|$ and let $\text{sgn}(x) = \begin{cases} 1, \text{if } x \geq 0 \\ -1, \text{if } x < 0 \end{cases}$

Then :

Options :

40503632951. f is not invertible

40503632952. $f^{-1}(x) = \text{sgn}(x-1)\sqrt{|x-1|}$

40503632953. $f^{-1}(x) = \sqrt{|x-1|}$

40503632954. $f^{-1}(x) = \text{sgn}(x)\sqrt{|x-1|}$

Question Number : 2 Question Id : 4050369075 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let α be a common root of the equations, $x^2 - x - 12 = 0$ and $\lambda x^2 + 10x + 3 = 0$ (where λ is an integer). If β is the other root of the second equation, then the ordered pair (λ, β) is equal to :

Options :

40503632955. $\left(-3, \frac{1}{3}\right)$

40503632956. $\left(-3, -\frac{1}{3}\right)$

40503632957. $\left(3, \frac{1}{3}\right)$

40503632958. $\left(3, -\frac{1}{3}\right)$

Question Number : 3 Question Id : 4050369076 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If $z = -1 + i\sqrt{2}$, then which one of the following is not true ?

Options :

40503632959. $\mathrm{Re}(z^4) + \mathrm{Re}(z^3) = -2$

40503632960. $\mathrm{Im}(z^4) + \mathrm{Im}(z^3) = 5\sqrt{2}$

40503632961. $\mathrm{Im}(z^4) - \mathrm{Re}(z^3) = 4\sqrt{2} - 5$

40503632962. $\mathrm{Re}(z^4) - \mathrm{Im}(z^3) = \sqrt{2} - 7$

Question Number : 4 Question Id : 4050369077 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

For $\theta \in (0, \pi/2)$, $\theta \in (\pi, 2\pi)$ and $\beta \in \mathbf{R}$, the value of the determinant

$$\begin{vmatrix} \cos 2\alpha & \cos(\alpha+\theta) & -\sin(\alpha+\theta) \\ \sin\alpha & \sin\theta & \cos\theta \\ \beta\cos\alpha & -\cos\theta & \sin\theta \end{vmatrix}:$$

Options :

40503632963. is independent of α.

40503632964. is independent of β.

40503632965. is independent of θ.

40503632966. depends on all α, β and θ.

Question Number : 5 Question Id : 4050369078 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let $A=\begin{pmatrix}\alpha & 1 & 2\\ 1 & 2 & 3\\ 3 & 1 & 1\end{pmatrix}$, $\alpha\epsilon\mathbf{R}$ and $B=[b_{ij}]_{3\times 3}$ such that $AB=rI$, $r\neq 0$ in $\mathbf{R}$. If $b_{32}=-\frac{3}{2}r$ and $|adjB|=r^5$, then $|adj(AB)|$ equals :

Options :

40503632967. 4^{12}

40503632968. 2^{12}

40503632969. 2^6

40503632970. 4^8

Question Number : 6 Question Id : 4050369079 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let a_1, a_2, a_3, a_4 and a_5 be in A.P. with the common difference greater than 2. If $\sum_{i=1}^{5} a_i = 30$ and $a_1\cdot a_2\cdot a_3\cdot a_4\cdot a_5=3840$, then $a_1\cdot a_5$ is equal to :

Options :

40503632971. 82

40503632972. -128

40503632973. 128

40503632974. -82

Question Number : 7 Question Id : 4050369080 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let the functions f and g be defined as $f(x)=2\cos|x-2|+3|x|\sin|x|$ and $g(x)=x^5+x$. If S be the set of points where the function $(fog)(x)$ is not differentiable, then S is equal to :

Options :

40503632975. $\{1\}$

40503632976. $\{0\}$

40503632977. $\{0, 1\}$

40503632978. ϕ (an empty set)

Question Number : 8 Question Id : 4050369081 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let f be a twice differentiable function on **R** such that $f(0)=4$ and the function, $g(x)=\frac{1}{2}f^2(x)+3x^3-5$ is monotonically increasing in **R**. Then $f(1)$ **cannot** be :

Options :

40503632979. $2\sqrt{3}$

40503632980. $3\sqrt{2}$

40503632981. 4

40503632982. $2\sqrt{2}$

Question Number : 9 Question Id : 4050369082 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let $f(x)=(2x^2-9x+11)\cdot e^x,\ -\infty < x < \infty$.
Then f has :

Options :

40503632983. a local maxima at $x=\frac{1}{2}$ and a local minima at $x=2$.

40503632984. a local minima at $x=\frac{1}{2}$ and a local maxima at $x=2$.

40503632985. neither a local maxima nor a local minima at $x=\frac{1}{2}$.

40503632986. neither a local maxima nor a local minima at $x=2$.

Question Number : 10 Question Id : 4050369083 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If for $x > 0$,

$$\int \frac{e^{\sqrt{x}} \sin\left(\frac{\pi}{4} + \sqrt{x}\right)}{\sqrt{x}} dx = e^{\sqrt{x}} \cdot f(x) + C,$$

where C is a constant of integration, then $f(x)$ is equal to :

Options :

40503632987. $\frac{3}{\sqrt{2}} \cos\sqrt{x}$

40503632988. $\frac{2\sqrt{2}}{3} \sin\sqrt{x}$

40503632989. $\sqrt{2} \sin\sqrt{x}$

40503632990. $\sqrt{2} \cos\sqrt{x}$

Question Number : 11 Question Id : 4050369084 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If $y(x) = \int_{\pi^2/16}^{x^2} \frac{\sin x \sin\sqrt{\theta}}{1 + \cos^2\sqrt{\theta}} d\theta$, then

$y'\left(\frac{\pi}{4}\right)$ is equal to :

Options :

40503632991. $\frac{\pi}{3\sqrt{2}}$

40503632992. $\frac{\pi}{12}$

40503632993. $\frac{\pi}{6}$

40503632994. $\frac{\pi}{3}$

Question Number : 12 Question Id : 4050369085 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The area (in sq. units) of the region $\{(x, y) \in \mathbf{R}^2 : 2|x| + |y| \leq 2 \text{ and } x + y \geq 1\}$ is :

Options :

40503632995. $\frac{1}{3}$

40503632996. $\frac{2}{3}$

40503632997. $\frac{1}{2}$

40503632998. $\frac{4}{3}$

Question Number : 13 Question Id : 4050369086 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let ABC be a triangle such that the vertex A has coordinates $(-3, 1)$. If the equation of the median through B be $2x+y-3=0$ and the equation of the bisector of angle C be $7x-4y-1=0$, then the equation of the line BC is :

Options :

40503632999. $15x+y=50$

40503633000. $4x-y=7$

40503633001. $18x-y=49$

40503633002. $7x-3y=6$

Question Number : 14 Question Id : 4050369087 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If the ellipse centered at the origin has a focus at (0, 3) and the corresponding directrix is $y=9$, then which one of the following is not true for this ellipse ?

Options :

40503633003. Length of its minor axis is $6\sqrt{2}$

40503633004. Length of its latus rectum is $4\sqrt{3}$

40503633005. Point $\left(\sqrt{6}, 2\sqrt{3}\right)$ lies on it

40503633006. Point $\left(\sqrt{6}, -3\sqrt{2}\right)$ lies on it

Question Number : 15 Question Id : 4050369088 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If a hyperbola has length of its transverse axis $=\sqrt{2}$ and it has the same foci as that of the ellipse, $4x^2+3y^2=24$, then this hyperbola also passes through the point whose coordinates are :

Options :

40503633007. $\left(2\sqrt{3}, \frac{3}{\sqrt{2}}\right)$

40503633008. $\left(2\sqrt{3}, \frac{3}{2}\right)$

40503633009. $\left(\frac{1}{\sqrt{6}}, 1\right)$

40503633010. $\left(\frac{1}{\sqrt{6}}, \frac{\sqrt{2}}{3}\right)$

Question Number : 16 Question Id : 4050369089 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let P be the point of intersection of the plane, $4x-6y+14z=57$ with the line joining the points A(2, 3, 5) and B(1, −1, 4). If $BP=\lambda AP$, then the value of λ is :

Options :

40503633011. $\frac{1}{9}$

40503633012. 9

40503633013. $\frac{1}{3}$

40503633014. 3

Question Number : 17 Question Id : 4050369090 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

A six faced biased dice is so loaded that in any of its toss getting any of even scores is equally likely and the probability of getting an even score is three times the probability of getting an odd score. This dice is tossed repeatedly until a six is obtained. If X denotes the number of tosses required, then $P(X < 4)$ is :

Options :

40503633015. $\frac{19}{3^3}$

40503633016. $\frac{37}{4^3}$

40503633017. $\frac{61}{4^3}$

40503633018. $\frac{397}{(12)^3}$

Question Number : 18 Question Id : 4050369091 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If $2\sin x - \cos 2x = 1$, then :

Options :

40503633019. $\cos^4 x - \cos^2 x = 3 - \sqrt{5}$

40503633020. $2(\cos^4 x - \cos^2 x) = -1$

40503633021. $\sin^4 x - \sin^2 x = 2 - \sqrt{5}$

40503633022. $2(\sin^4 x - \sin^2 x) = 1$

Question Number : 19 Question Id : 4050369092 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let $\vec{a}, \vec{b}, \vec{c}$ be any three non-coplanar vectors. If the points $A\left(-2\vec{a}+3\vec{b}+5\vec{c}\right)$, $B\left(\vec{a}+2\vec{b}+3\vec{c}\right)$ and $C\left(7\vec{a}-\lambda\vec{c}\right)$ are collinear, then λ is equal to :

Options :

40503633023. 1

40503633024. -1

40503633025. 2

40503633026. -2

Question Number : 20 Question Id : 4050369093 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which one of the following is a tautology ?

Options :

40503633027. $\sim (p \rightarrow q) \rightarrow q$

40503633028. $\sim (p \rightarrow q) \leftrightarrow \sim q$

40503633029. $\sim (p \rightarrow q) \leftrightarrow p$

40503633030. $\sim (p \rightarrow q) \rightarrow p$

Question Number : 21 Question Id : 4050369094 Question Type : SA Correct Marks : 4 Wrong Marks : 0

If the sum of all possible 4 digit numbers formed using digits 1, 2, 3, 4 without repetition, is 1111k, then k is equal to _____.

Question Number : 22 Question Id : 4050369095 Question Type : SA Correct Marks : 4 Wrong Marks : 0

If $x=\text{cosec}\theta-\sin\theta$ and $y=\text{cosec}^5\theta-\sin^5\theta$,

$0<\theta<\frac{\pi}{2}$, then $\left(x^2+4\right)\left(\frac{dy}{dx}\right)^2-25y^2$

is equal to _____.

Question Number : 23 Question Id : 4050369096 Question Type : SA Correct Marks : 4 Wrong Marks : 0

Let the function $f:N\to R$ satisfy $f(x+y)=f(x)\cdot f(y)$ for all $x,y\in N$ and $f(1)=2$.

If $\sum_{k=1}^{50} f(4+k)=\lambda(2^{\beta}-1)$, then $\lambda+\beta$ is equal to _____.

Question Number : 24 Question Id : 4050369097 Question Type : SA Correct Marks : 4 Wrong Marks : 0

Let the circle, $(x-a)^2+(y-b)^2=8$ and the parabola, $y^2=4x$ have a common tangent at the point P(1, 2). If C is the centre of the circle and S is the focus of the parabola, then the area (in sq. units) of ΔCPS is equal to _____.

Question Number : 25 Question Id : 4050369098 Question Type : SA Correct Marks : 4 Wrong Marks : 0

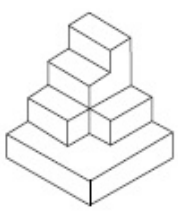
If $y=y(x)$ is a solution of the differential equation, $x\frac{dy}{dx}=y(2-3xy)$, $x>0$ with $y(1)=1$, then $y\left(\frac{1}{4}\right)$ is equal to _____.

Aptitude Test

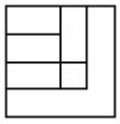
Section Number : 2
Number of Questions : 50
Number of Questions to be attempted : 50
Section Marks : 200

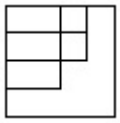
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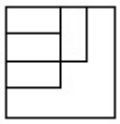
The 3 - D figure shows the view of an object. Identify the correct top view from amongst the answer figures.

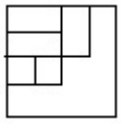


Options :

40503633036. 

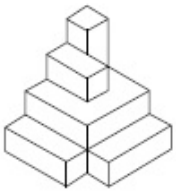
40503633037. 

40503633038. 

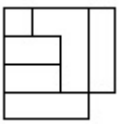
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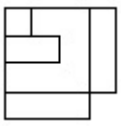
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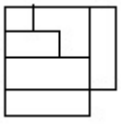
The 3 - D figure shows the view of an object. Identify the correct top view from amongst the answer figures.

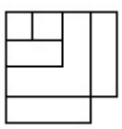


Options :

40503633040. 

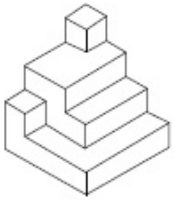
40503633041. 

40503633042. 

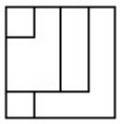
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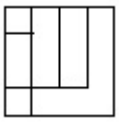
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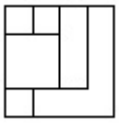
The 3 - D figure shows the view of an object. Identify the correct top view from amongst the answer figures.

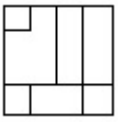


Options :

40503633044. 

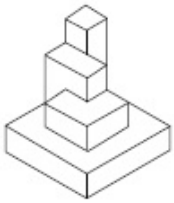
40503633045. 

40503633046. 

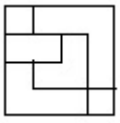
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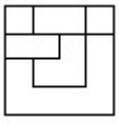
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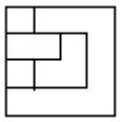
The 3 - D figure shows the view of an object. Identify the correct top view from amongst the answer figures.

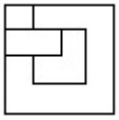


Options :

40503633048. 

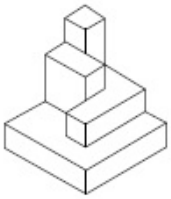
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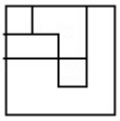
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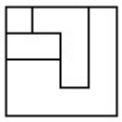
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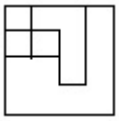
The 3 - D figure shows the view of an object. Identify the correct top view from amongst the answer figures.

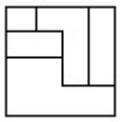


Options :

40503633052. 

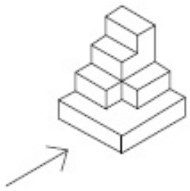
40503633053. 

40503633054. 

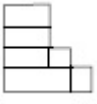
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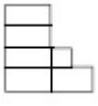
Question Number : 31 Question Id : 4050369104 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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



Options :

40503633056. 

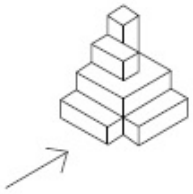
40503633057. 

40503633058. 

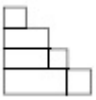
40503633059. 

Question Number : 32 Question Id : 4050369105 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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



Options :

40503633060. 

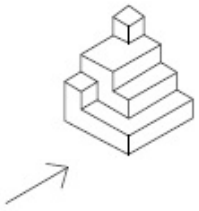
40503633061. 

40503633062. 

40503633063. 

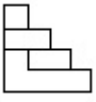
Question Number : 33 Question Id : 4050369106 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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

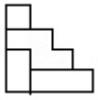


Options :

40503633064. 

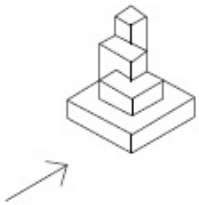
40503633065. 

40503633066. 

40503633067. 

Question Number : 34 Question Id : 4050369107 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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



Options :

40503633068. 

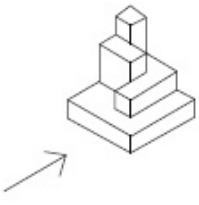
40503633069. 

40503633070. 

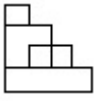
40503633071. 

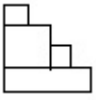
Question Number : 35 Question Id : 4050369108 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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

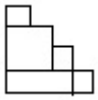


Options :

40503633072. 

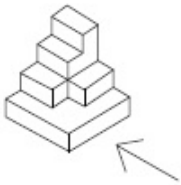
40503633073. 

40503633074. 

40503633075. 

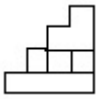
Question Number : 36 Question Id : 4050369109 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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

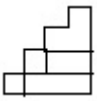


Options :

40503633076. 

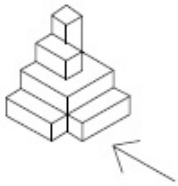
40503633077. 

40503633078. 

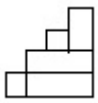
40503633079. 

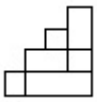
Question Number : 37 Question Id : 4050369110 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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

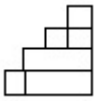


Options :

40503633080. 

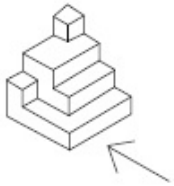
40503633081. 

40503633082. 

40503633083. 

Question Number : 38 Question Id : 4050369111 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

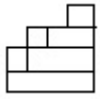
The 3 - D figure shows the view of an object. Identify the correct view in the direction of the arrow, from amongst the answer figures.



Options :

40503633084. 

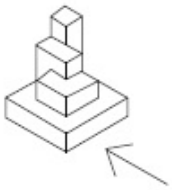
40503633085. 

40503633086. 

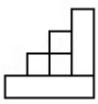
40503633087. 

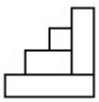
Question Number : 39 Question Id : 4050369112 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

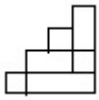
The 3 - D figure shows the view of an object. Identify the correct view in the direction of the arrow, from amongst the answer figures.

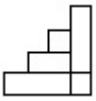


Options :

40503633088. 

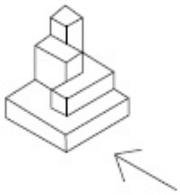
40503633089. 

40503633090. 

40503633091. 

Question Number : 40 Question Id : 4050369113 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

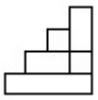
The 3 - D figure shows the view of an object. Identify the correct view in the direction of the arrow, from amongst the answer figures.



Options :

40503633092. 

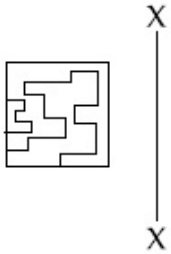
40503633093. 

40503633094. 

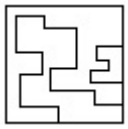
40503633095. 

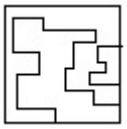
Question Number : 41 Question Id : 4050369114 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

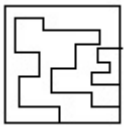
Which one of the answer figures is the correct mirror image of the problem figure with respect to X – X ?

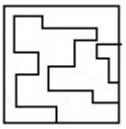


Options :

40503633096. 

40503633097. 

40503633098. 

40503633099. 

Question Number : 42 Question Id : 4050369115 Question Type : MCQ 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 :

40503633100. 

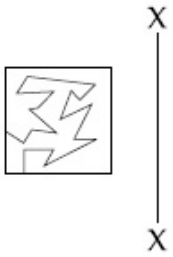
40503633101. 

40503633102. 

40503633103. 

Question Number : 43 Question Id : 4050369116 Question Type : MCQ 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 :

40503633104. 

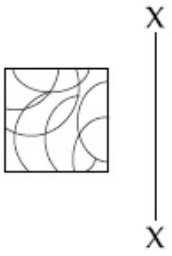
40503633105. 

40503633106. 

40503633107. 

Question Number : 44 Question Id : 4050369117 Question Type : MCQ 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 :

40503633108. 

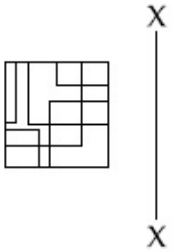
40503633109. 

40503633110. 

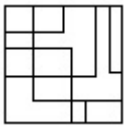
40503633111. 

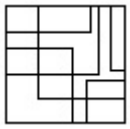
Question Number : 45 Question Id : 4050369118 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

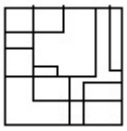
Which one of the answer figures is the correct mirror image of the problem figure with respect to X – X ?

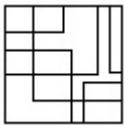


Options :

40503633112. 

40503633113. 

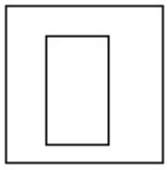
40503633114. 

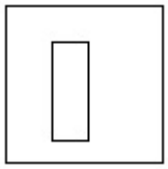
40503633115. 

Question Number : 46 Question Id : 4050369119 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

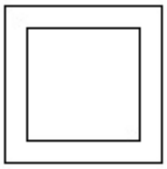
Find the odd figure out of the problem figures given below.

Options :

40503633116. 

40503633117. 

40503633118. 

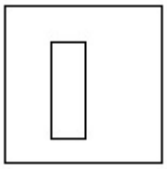
40503633119. 

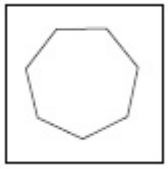
Question Number : 47 Question Id : 4050369120 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

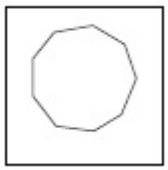
Find the odd figure out of the problem figures given below.

Options :

40503633120. 

40503633121. 

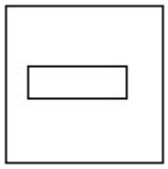
40503633122. 

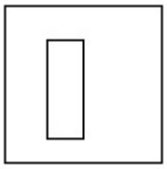
40503633123. 

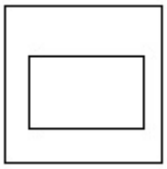
Question Number : 48 Question Id : 4050369121 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

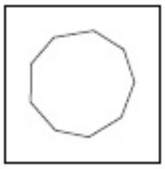
Find the odd figure out of the problem figures given below.

Options :

40503633124. 

40503633125. 

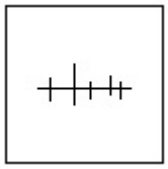
40503633126. 

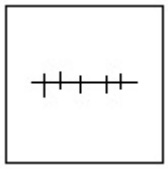
40503633127. 

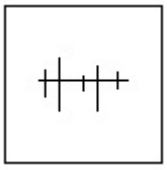
Question Number : 49 Question Id : 4050369122 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

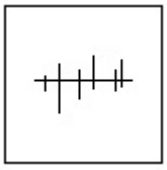
Find the odd figure out of the problem figures given below.

Options :

40503633128. 

40503633129. 

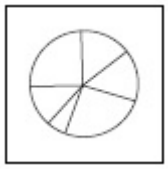
40503633130. 

40503633131. 

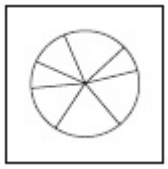
Question Number : 50 Question Id : 4050369123 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

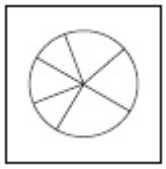
Find the odd figure out of the problem figures given below.

Options :

40503633132. 

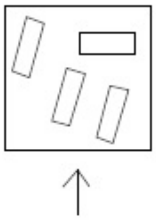
40503633133. 

40503633134. 

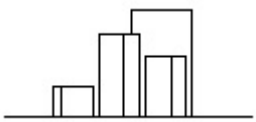
40503633135. 

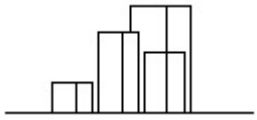
Question Number : 51 Question Id : 4050369124 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

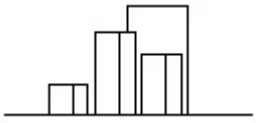
The problem figure shows the top view of objects. Looking in the direction of the arrow, identify the correct elevation, from amongst the answer figures.

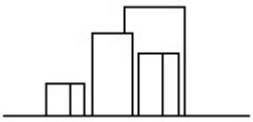


Options :

40503633136. 

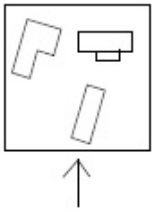
40503633137. 

40503633138. 

40503633139. 

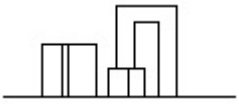
Question Number : 52 Question Id : 4050369125 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

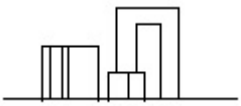
The problem figure shows the top view of objects. Looking in the direction of the arrow, identify the correct elevation, from amongst the answer figures.

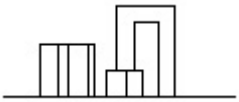


Options :

40503633140. 

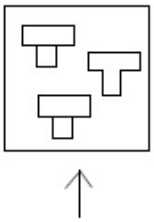
40503633141. 

40503633142. 

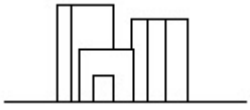
40503633143. 

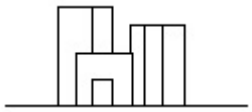
Question Number : 53 Question Id : 4050369126 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

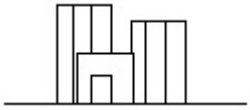
The problem figure shows the top view of objects. Looking in the direction of the arrow, identify the correct elevation, from amongst the answer figures.

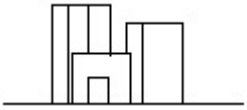


Options :

40503633144. 

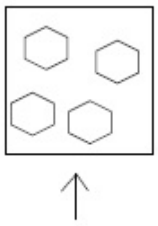
40503633145. 

40503633146. 

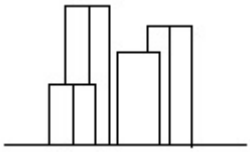
40503633147. 

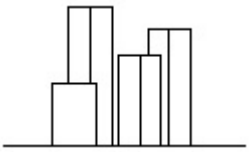
Question Number : 54 Question Id : 4050369127 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

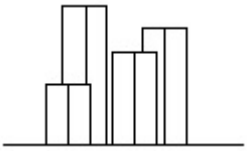
The problem figure shows the top view of objects. Looking in the direction of the arrow, identify the correct elevation, from amongst the answer figures.

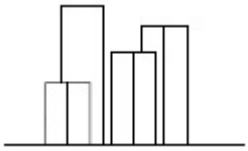


Options :

40503633148. 

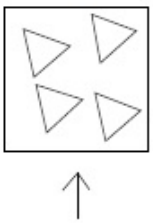
40503633149. 

40503633150. 

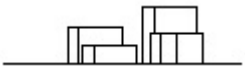
40503633151. 

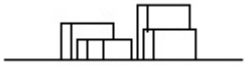
Question Number : 55 Question Id : 4050369128 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

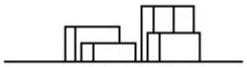
The problem figure shows the top view of objects. Looking in the direction of the arrow, identify the correct elevation, from amongst the answer figures.



Options :

40503633152. 

40503633153. 

40503633154. 

40503633155. 

Question Number : 56 Question Id : 4050369129 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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



Options :

40503633156. 

40503633157. 

40503633158. 

40503633159. 

Question Number : 57 Question Id : 4050369130 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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



Options :

40503633160. 

40503633161. 

40503633162. 

40503633163. 

Question Number : 58 Question Id : 4050369131 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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



Options :

40503633164. 

40503633165. 

40503633166. 

40503633167. 

Question Number : 59 Question Id : 4050369132 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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



Options :

40503633168. 

40503633169. 

40503633170. 

40503633171. 

Question Number : 60 Question Id : 4050369133 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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



Options :

40503633172. 

40503633173. 

40503633174. 

40503633175. 

Question Number : 61 Question Id : 4050369134 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

10 Downing Street is the residence of which one of the following ?

Options :

40503633176. President of America

40503633177. Prime Minister of England

40503633178. President of France

40503633179. President of Sri Lanka

Question Number : 62 Question Id : 4050369135 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

In the Northern Hemisphere the winter sun sets in which one of the following directions ?

Options :

40503633180. North East

40503633181. North West

40503633182. South East

40503633183. South West

Question Number : 63 Question Id : 4050369136 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The famous Badrinath temple is located in which one of the following States ?

Options :

40503633184. Kerala

40503633185. Tamil Nadu

40503633186. Assam

40503633187. Uttarakhand

Question Number : 64 Question Id : 4050369137 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What is the thickness of a one brick thick wall ?

Options :

40503633188. 4.5″

40503633189. 9″

40503633190. 13.5″

40503633191. 12″

Question Number : 65 Question Id : 4050369138 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Why is the depth of a beam normally more than its width ?

Options :

40503633192. Horizontal Force

40503633193. Momentum

40503633194. Moment of Inertia

40503633195. Balance

Question Number : 66 Question Id : 4050369139 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Where is the famous Notre Dame Cathedral which caught fire recently located ?

Options :

40503633196. Paris

40503633197. Hague

40503633198. Venice

40503633199. Rome

Question Number : 67 Question Id : 4050369140 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The concept of CharBagh garden found in which one of the following garden concepts ?

Options :

40503633200. Christian

40503633201. Chinese

40503633202. Islamic

40503633203. Zen

Question Number : 68 Question Id : 4050369141 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Where is the Bara Imambara located ?

Options :

40503633204. Kolkata

40503633205. Mumbai

40503633206. Hyderabad

40503633207. Lucknow

Question Number : 69 Question Id : 4050369142 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which one of the colors reflects the maximum light ?

Options :

40503633208. Red

40503633209. Green

40503633210. White

40503633211. Black

Question Number : 70 Question Id : 4050369143 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which one of the following colors denotes equality ?

Options :

40503633212. White

40503633213. Blue

40503633214. Indigo

40503633215. Red

Question Number : 71 Question Id : 4050369144 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which one of the following describes the texture of a hand made brick ?

Options :

40503633216. Smooth

40503633217. Glossy

40503633218. Rough

40503633219. Silky

Question Number : 72 Question Id : 4050369145 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What are shafts used for in buildings ?

Options :

1. Beauty

2. Concealing pipes

3. Structural strength

4. Stability

Question Number : 73 Question Id : 4050369146 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which one of the following is the most suitable material for toilet floors ?

Options :

40503633224. Polished granite

40503633225. Non skid tiles

40503633226. Wood

40503633227. Carpet

Question Number : 74 Question Id : 4050369147 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Who amongst the following designed Indian Institute of Management ?

Options :

40503633228. Charles Correa

40503633229. B.V. Doshi

40503633230. Louis Kahn

40503633231. A.P. Kanvinde

Question Number : 75 Question Id : 4050369148 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Who amongst the following designed The Falling Waters ?

Options :

40503633232. Frank Ghery

40503633233. Zaha Hadid

40503633234. Norman Foster

40503633235. Frank Lloyd Wright

Drawing

Section Number :	3
Number of Questions :	2
Number of Questions to be attempted :	2
Section Marks :	100

Question Number : 76 Question Id : 4050369149 Question Type : SUBJECTIVE Correct Marks : 50 Wrong Marks : 0

In the space provided for the answer of this question, draw an aesthetic composition appropriate to this space using only rectangles. There is no restriction to numbers, sizes, placement and directions of these shapes. Color this composition so that it becomes visually exciting.

Question Number : 77 Question Id : 4050369150 Question Type : SUBJECTIVE Correct Marks : 50 Wrong Marks : 0

Draw from imagination a highway on which cars and trucks are moving in both directions.

OR

Draw from imagination an interior of cinema hall.

OR

Draw from memory your best teachers face.