National Testing Agency

Question Paper Name :	JEE Main 2023 Paper 2A (B.Arch) Apr 12 Shift 2
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Paper 2A (B.Arch)

Group Id :	36669479

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 : 3666947699 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If $f(x)=\frac{x^3}{x-1}+\frac{x^3}{x+1}$ and $g(x)=\sqrt{x}$, then $fog:[0,2]-\{1\}\to\mathbb{R}$ is :

Options :

36669424431. one-one but not onto

36669424432. one-one and onto

36669424433. onto but not one-one

36669424434. neither one-one nor onto

Question Number : 2 Question Id : 3666947700 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The sum of squares of the values of $\alpha\in\mathbb{R}$ such that the argument of $\frac{\alpha+i}{\alpha-i}$ is 60°, $i=\sqrt{-1}$, is :

Options :

36669424435. 3

36669424436. $\frac{10}{3}$

36669424437. $\frac{11}{3}$

36669424438. 4

Question Number : 3 Question Id : 3666947701 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

For the system of equations

$x + \lambda y - z = 1$

$x + 2y + \lambda z = 2$

$x + 2y + z = 2,$

which one of the following is **NOT** correct?

Options :

36669424439. it has unique solution if λ is not a root of the equation $t^2 - 3t + 2 = 0$

36669424440. it has unique solution if λ is not a root of the equation $t^2 - t - 2 = 0$

36669424441. it has infinitely many solutions if $\lambda = 1$

36669424442. it has no solution if $\lambda = 2$

Question Number : 4 Question Id : 3666947702 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If $a_n = (2n^2 - n + 2)(n!)$ then $\sum_{n=1}^{20} a_n$ is equal to :

Options :

36669424443. $37(20!) - 1$

36669424444. $37(20!) + 1$

36669424445. $39(21!) + 1$

36669424446. $39(21!) - 1$

Question Number : 5 Question Id : 3666947703 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

$$\lim_{x \to 0^+} \frac{1}{\sqrt{x}} \left(\frac{1}{\sin x} - \frac{1}{x} \right)$$

Options :

36669424447. is equal to 0

36669424448. is equal to $\frac{1}{5}$

36669424449. is equal to 1

36669424450. does not exist

Question Number : 6 Question Id : 3666947704 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let $x = x(t)$ be the solution curve of the differential equation $\frac{dx}{dt} = -kx$, and $x(0)=100$, $x\left(\frac{1}{2}\right) = 80$. If $x(t_\alpha)=5$, then t_α is equal to :

Options :

36669424451. $\frac{\log_e 5 + \log_e 4}{2(\log_e 5 - \log_e 4)}$

36669424452. $\frac{\log_e 5 + \log_e 4}{\log_e 5 - \log_e 4}$

36669424453. $\frac{\log_e 5 - \log_e 4}{2(\log_e 5 + \log_e 4)}$

36669424454. $\frac{\log_e 5 - \log_e 4}{\log_e 5 + \log_e 4}$

Question Number : 7 Question Id : 3666947705 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The slope of the tangent to the curve $y = y(x) = \int_{\sin^{-1}(x)}^{\cos^{-1}(x)} \sqrt{1+4\sin^2 t}\, dt;\ 0 \le x \le 1$ at the point $\left(\frac{1}{\sqrt{2}}, 0\right)$ on the curve is :

Options :

36669424455. $-2\sqrt{6}$

36669424456. $2\sqrt{6}$

36669424457. $-4\sqrt{3}$

36669424458. $4\sqrt{3}$

Question Number : 8 Question Id : 3666947706 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let $\alpha,\beta,\gamma\left(0 < \alpha, \beta, \gamma < \frac{\pi}{2}\right)$ be the angles between non-zero vectors $\vec{a}$ and $\vec{b}$, $\vec{b}$ and $\vec{c}$, $\vec{c}$ and $\vec{a}$ respectively. If θ is the angle that the vector $\vec{a}$ makes with the plane containing $\vec{b}$ and $\vec{c}$, then

Options :

36669424459. $\cos^2\theta = \operatorname{cosec}^2\beta\,(\cos^2\alpha + \cos^2\gamma - 2\cos\alpha\cos\beta\cos\gamma)$

36669424460. $\cos^2\theta = \sec^2\beta\,(\cos^2\alpha + \cos^2\gamma + 2\cos\alpha\cos\beta\cos\gamma)$

36669424461. $\sin^2\theta = \operatorname{cosec}^2\beta\,(\cos^2\alpha + \cos^2\gamma - 2\cos\alpha\cos\beta\cos\gamma)$

36669424462. $\sin^2\theta = \sec^2\beta\,(\cos^2\alpha + \cos^2\gamma + 2\cos\alpha\cos\beta\cos\gamma)$

Question Number : 9 Question Id : 3666947707 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The domain of the function

$f(x) = \sin^{-1}(\log_2((x-1)(x-2)))$ is :

Options :

36669424463. $[0, 3]$

36669424464. $\left[0, \frac{3-\sqrt{3}}{2}\right] \cup \left[\frac{3+\sqrt{3}}{2}, 3\right]$

36669424465. $\left(\frac{3-\sqrt{3}}{2}, 1\right) \cup \left(2, \frac{3+\sqrt{3}}{2}\right)$

36669424466. $\left[0, \frac{3-\sqrt{6}}{2}\right] \cup \left[\frac{3+\sqrt{6}}{2}, 3\right]$

Question Number : 10 Question Id : 3666947708 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let α and β be the roots of the equation $2x^2 - 5x - 1 = 0$. For $n \in N$, let $P_n = \alpha^n + \beta^n$.

Then $\frac{2P_{11}(2P_{10} - 5P_9)}{P_8(5P_{10} + P_9)}$ is equal to :

Options :

36669424467. $-\frac{1}{2}$

36669424468. $\frac{1}{2}$

36669424469. -1

36669424470. 1

Question Number : 11 Question Id : 3666947709 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If the image of the point (1, 1, 2) in the plane $2x - y + z + 3 = 0$ is the point P, then the distance of P from origin is

Options :

36669424471. $2\sqrt{3}$

36669424472. $3\sqrt{2}$

36669424473. 4

36669424474. 6

Question Number : 12 Question Id : 3666947710 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

For three non-coplanar vectors $\vec{a},\vec{b},\vec{c}$, if $\left(\vec{b}+\vec{c}\right)\cdot\left\{\left(\vec{c}+\vec{a}\right)\times\left(\vec{a}+\vec{b}\right)\right\}=\alpha\left[\vec{a}\ \vec{b}\ \vec{c}\right]$ and $\left(\vec{a}+\vec{b}\right)\cdot\left\{\left(\vec{b}+\vec{c}\right)\times\left(\vec{a}+\vec{b}+\vec{c}\right)\right\}=\beta\left[\vec{a}\ \vec{b}\ \vec{c}\right]$, then $\alpha+\beta$ is equal to :

Options :

36669424475. -3

36669424476. -1

36669424477. 1

36669424478. 3

Question Number : 13 Question Id : 3666947711 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If $I(x)=\int\frac{dx}{1-2\sin^2 x\cos^2 x}$, then $\tan\left(\sqrt{2}\left(I\left(\frac{\pi}{8}\right)-I(0)\right)\right)$ is equal to :

Options :

36669424479. $\frac{1}{\sqrt{2}}$

36669424480. 1

36669424481. $\sqrt{2}$

36669424482. 2

Question Number : 14 Question Id : 3666947712 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let X have a binomial distribution B (6, p). If the sum of the mean and the variance of X is $\frac{21}{8}$, then $\frac{P(2\le X<4)}{P(4<X<6)}$ is equal to :

Options :

36669424483. 65

36669424484. 195

36669424485. $\frac{195}{2}$

36669424486. $\frac{225}{2}$

Question Number : 15 Question Id : 3666947713 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If the statement

$((p * (\sim q)) \wedge (p \vee q)) \Leftrightarrow p$

is a tautology, then $*$ is :

Options :

36669424487. $\wedge$

36669424488. $\vee$

36669424489. $\Rightarrow$

36669424490. $\Leftrightarrow$

Question Number : 16 Question Id : 3666947714 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If the circles $x^2 + y^2 - 2x - 4y + 4 = 0$ and $x^2 + y^2 - 6x - 10y + 20 + 2\sqrt{13} = 0$ touch each other at the point (a, b), then $(3a - 2b)^2$ is equal to :

Options :

36669424491. 1

36669424492. 4

36669424493. 9

36669424494. 13

Question Number : 17 Question Id : 3666947715 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If the angle between the line $l : \frac{x-1}{2} = \frac{y+1}{1} = \frac{z-2}{2}$ and the plane P : $\lambda x + 4y - 7 = 0, \lambda \neq 0$, is $\operatorname{cosec}^{-1}\left(\frac{3}{2}\right)$, then the sum of co-ordinates of the point where line l crosses the plane P is :

Options :

36669424495. -33

36669424496. -2

36669424497. 3

36669424498. 6

Question Number : 18 Question Id : 3666947716 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Let three distinct normal be drawn to the parabola $y^2 + 4y - 6x - 8 = 0$ from a point (a, b) on the axis of the parabola. Then :

Options :

36669424499. $a \in (1, \infty)$ and $b = -2$

36669424500. $a \in (0, \infty)$ and $b = -2$

36669424501. $a \in (1, \infty)$ and $b = 2$

36669424502. $a \in (2, \infty)$ and $b = 2$

Question Number : 19 Question Id : 3666947717 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given ${}^{n}C_{r} = \dfrac{n!}{r!(n-r)!}$, $0 \leq r \leq n$ and n is a non-negative integer. Then a possible value of k for which the equality

$${}^{50}C_{k-1} + \sum_{r=1}^{50} {}^{100-r}C_{k-2} = {}^{100}C_{49}$$ holds, is

Options :

36669424503. 40

36669424504. 49

36669424505. 50

36669424506. 25

Question Number : 20 Question Id : 3666947718 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

If an unbiased die, marked with –3, –2, –1, 0, 1, 2 on its faces, is thrown four times, then the probability of getting –1 as the sum of outputs is :

Options :

36669424507. $\dfrac{7}{81}$

36669424508. $\dfrac{35}{324}$

36669424509. $\dfrac{8}{81}$

36669424510. $\dfrac{26}{243}$

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 : 3666947719 Question Type : SA Correct Marks : 4 Wrong Marks : 1

$(\sin 5^\circ \sin 55^\circ \sin 65^0 \sin 75^\circ)^{-1}$ is equal to _____.

Question Number : 22 Question Id : 3666947720 Question Type : SA Correct Marks : 4 Wrong Marks : 1

If the shortest distance between the lines

$3x + 2y - 4z - 5 = 0 = 5x - 7y - 17z + 2$ and $\frac{x-2}{3} = \frac{y-1}{-5} = \frac{z+1}{2}$ is $\frac{10}{\sqrt{k}}$, then k is equal to _____.

Question Number : 23 Question Id : 3666947721 Question Type : SA Correct Marks : 4 Wrong Marks : 1

For $p \in \mathbb{N}$, if the angle between pair of tangents drawn to the ellipse $3x^2 + 2y^2 = 5$ from the point $(1, p)$ is $\tan^{-1}\left(\frac{12}{\sqrt{5}}\right)$, then the distance of the vertex of the parabola $y = x^2 - px + p + 1$ from the point $(-7, 8)$ is equal to _____.

Question Number : 24 Question Id : 3666947722 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let P be a polygon with n vertices such that the line segment joining any two points of P remains entirely in P. If the number of diagonals of P is $n+25$, then n is equal to _____.

Question Number : 25 Question Id : 3666947723 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let $f(x)$ be a polynomial of degree 5 such that $\lim\limits_{x\to 0} \frac{f(x)}{x^2} = 1$, $f(-1) = -1$, $f(x) - 14x$ has an extrema at $x = 1$ and $f(x) - 10x$ has an extrema at $x = -1$. Then $f(2)$ is equal to _____.

Question Number : 26 Question Id : 3666947724 Question Type : SA Correct Marks : 4 Wrong Marks : 1

The number of 7 digits integers formed by using the digits 2, 3, 4, 5 only and having the sum of digits equal to 18 is _____.

Question Number : 27 Question Id : 3666947725 Question Type : SA Correct Marks : 4 Wrong Marks : 1

The remainder when $(556)^{40}$ is divided by 7 is _____.

Question Number : 28 Question Id : 3666947726 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let [t] denote the greatest integer less than or equal to t. Then the value of $10 - 10\int_{-2}^{2} [x + x^3]\,dx$ is _____.

Question Number : 29 Question Id : 3666947727 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let $A = \frac{1}{\sqrt{2}}\begin{bmatrix} 1 & 1 \\ -1 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 0 \\ 0 & -1 \end{bmatrix}$. If $k, l \in \mathbb{N}$ be such that $A^k B^l = I$, then the minimum value of $k + l$ is _____.

Question Number : 30 Question Id : 3666947728 Question Type : SA Correct Marks : 4 Wrong Marks : 1

Let $A_1 = [1]$, $A_2 = \begin{bmatrix} 2 & 3 \\ 4 & 5 \end{bmatrix}$, $A_3 = \begin{bmatrix} 6 & 7 & 8 \\ 9 & 10 & 11 \\ 12 & 13 & 14 \end{bmatrix}$,.... Then the sum of the diagonal elements of A_{20} is _____.

Aptitude Test

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

Question Number : 31 Question Id : 3666947729 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which of the following is not a sustainable development goal targeted to be achieved by 2030?

Options :

36669424521. gender equality

36669424522. zero hunger

36669424523. good health & well being

36669424524. space Research

Question Number : 32 Question Id : 3666947730 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

KANDARIYA MAHADEV TEMPLE is situated in which state of India?

Options :

36669424525. Madhya Pradesh

36669424526. Maharashtra

36669424527. Rajasthan

36669424528. Karnataka

Question Number : 33 Question Id : 3666947731 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Vertical elements in a building are:-

Options :

36669424529. Column, Lintel, Wall

36669424530. Lintel, Beam, Arch

36669424531. Column, Pier, Post

36669424532. Floor, Column, Arch

Question Number : 34 Question Id : 3666947732 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Cavity Walls are used for

Options :

36669424533. Waterproofing

36669424534. Heat Insulation

36669424535. Aesthetics

36669424536. Cost saving

Question Number : 35 Question Id : 3666947733 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Lintel is related to:

Options :

36669424537. Window

36669424538. Roof

36669424539. Foundation

36669424540. Pipe

Question Number : 36 Question Id : 3666947734 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1



Choose the correct option among the following by looking at the image given above:

Options :

36669424541. Lodhi Garden

36669424542. Jantar Mantar

36669424543. Rajghat

36669424544. Bahai Temple

Question Number : 37 Question Id : 3666947735 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

ARCHITECT ACT 1972 was enforced in which month

Options :

36669424545. 31st Dec

36669424546. 31st May

36669424547. 31st July

36669424548. 31st March

Question Number : 38 Question Id : 3666947736 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The dome of Rashtrapati Bhawan is influenced by which of the following:

Options :

36669424549. Gurudwara

36669424550. Mosque

36669424551. Stupa

36669424552. Temple

Question Number : 39 Question Id : 3666947737 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Dominion tower is designed by

Options :

36669424553. Bjarke Ingels

36669424554. Zaha Hadid

36669424555. Frei otto

36669424556. F.L. Wright

Question Number : 40 Question Id : 3666947738 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

The largest river island of the world is present in which state of India?

Options :

36669424557. Maharastra

36669424558. Assam

36669424559. Uttar Pradesh

36669424560. West Bengal

Question Number : 41 Question Id : 3666947739 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Who prepared the first layout of the town of Jamshedpur?

Options :

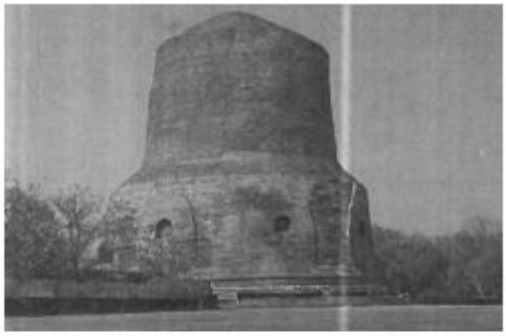
36669424561. Charles Correa

36669424562. Otto Konigsberger

36669424563. Le Corbuseir

36669424564. Messrs Julin Kennedy Sahhin

Question Number : 42 Question Id : 3666947740 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1



Identify the historical monument which is given in the image.

Options :

36669424565. Sanchi Stupa

36669424566. Victory Tower

36669424567. Sarnath Stupa

36669424568. Nalanda

Question Number : 43 Question Id : 3666947741 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Who was known as "Father of modern concrete"?

Options :

36669424569. John Paul

36669424570. John Nash

36669424571. John Smeaton

36669424572. Joseph Stein

Question Number : 44 Question Id : 3666947742 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Who is the architect of TWA Airport, New York?

Options :

36669424573. Eero Saarinen

36669424574. Mies Vander Rohe

36669424575. Joseph Allen Stein

36669424576. Alvar Aalto

Question Number : 45 Question Id : 3666947743 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Starting from a point, Maria walked 12 meters towards North, she turned right and walked 10 meters. She again turned right and walked 12 meters, then she turned left and walked 5 meters. How far is she now and in which direction from the starting point? Consider the starting point is in south direction.

Options :

36669424577. 27 meters towards East

36669424578. 5 meters towards East

36669424579. 10 meters towards West

36669424580. 15 meters towards East

Question Number : 46 Question Id : 3666947744 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Who among the following is not Pritzker prize winner?

Options :

36669424581. Wang Shu

36669424582. B.V. Doshi

36669424583. Arata Isozaki

36669424584. Denise Scott Brown

Question Number : 47 Question Id : 3666947745 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which of the following is not Antonio Gaudi's project?

Options :

36669424585. Casa Mila

36669424586. Sagrada Familia

36669424587. Casa Batllo

36669424588. Casa Milano

Question Number : 48 Question Id : 3666947746 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Which one of the following is most earthquake resistant structure?

Options :

36669424589. RCC framed structure

36669424590. Load bearing structure

36669424591. Mud walls structure

36669424592. Random stone masonary structure

Question Number : 49 Question Id : 3666947747 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

"CHALK" belongs to which category?

Options :

36669424593. Rock

36669424594. Mineral

36669424595. Wood

36669424596. Polymer

Question Number : 50 Question Id : 3666947748 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What are the three parts of colour theory?

Options :

36669424597. hyper, value and chrome

36669424598. honey, violet and chroma

36669424599. hue, value and chroma

36669424600. hue, chrome and violet

Question Number : 51 Question Id : 3666947749 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the three primary colours?

Options :

36669424601. Red, Blue and Green

36669424602. Red, Yellow and Blue

36669424603. Black, White and Yellow

36669424604. Blue, White and Yellow

Question Number : 52 Question Id : 3666947750 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Match List I with List II:

List I	List II
A. Kamakhya Temple	I. Madhya Pradesh
B. Padmanabha Temple	II. Rajasthan
C. Kandariya Mahadev	III. Assam
D. Karni Mata Temple	IV. Kerala

Choose the ***correct*** answer from the options given below:

Options :

36669424605. A-II, B-I, C-III, D-IV

36669424606. A-IV, B-III, C-II, D-I

36669424607. A-III, B-IV, C-I, D-II

36669424608. A-I, B-II, C-IV, D-III

Question Number : 53 Question Id : 3666947751 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

A square has an area of 100 sq.mt. How much will be its area on a scale of 1 : 20?

Options :

36669424609. 5 sq.mt.

36669424610. 50 sq.mt.

36669424611. 0.25 sq.mt.

36669424612. 25 sq.mt.

Question Number : 54 Question Id : 3666947752 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: Shakti Sthal is a memorial in Raj Ghat marking the cremation site of Indira Gandhi.

Statement II: A.P. Kanvinde in the landscape designer known for designing Shakti Sthal.

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

Options :

36669424613. Both Statement I and Statement II are true

36669424614. Both Statement I and Statement II are false

36669424615. Statement I is true but Statement II is false

36669424616. Statement I is false but Statement II is true

Question Number : 55 Question Id : 3666947753 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What is the full form of 'UDAY'?

Options :

36669424617. Ujjwala Discom Assitance Yojana

36669424618. Unnati Development Ayojan Yojana

36669424619. Ujwal Distribution Assurance Yojana

36669424620. Ujwal Discom Assurance Yojana

Question Number : 56 Question Id : 3666947754 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

What is the acronym for 'AYUSH'?

Options :

36669424621. Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy

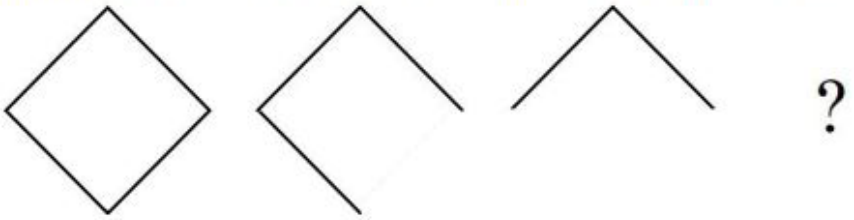
36669424622. Ayurveda, Yogic and Unani Siddha and Homeopathy

36669424623. Acroveda, Yoga, Unani, Siddha and Homeopathy

36669424624. Ayurveda, Yoga, Naturopathy, Unani Surgery and Homeopathy

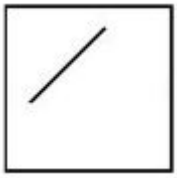
Question Number : 57 Question Id : 3666947755 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

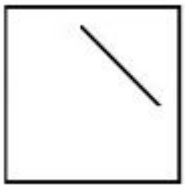
Select the correct option from answer figure which will be best suitable to continue the same pattern as established by the problem figure.



Options :

36669424625. 

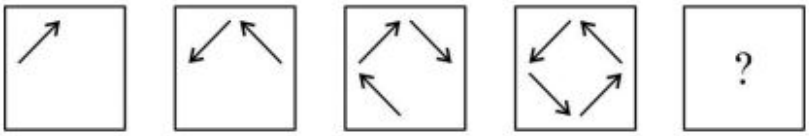
36669424626. 

36669424627. 

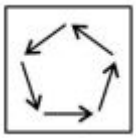
36669424628. 

Question Number : 58 Question Id : 3666947756 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Choose the correct option from the answer figures which completes the question series.

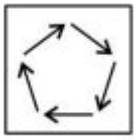


Options :

36669424629. 

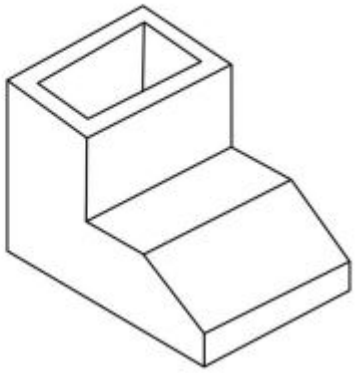
36669424630. 

36669424631. 

36669424632. 

Question Number : 59 Question Id : 3666947757 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the number of surfaces in the given 3D object.



Options :

36669424633. 12

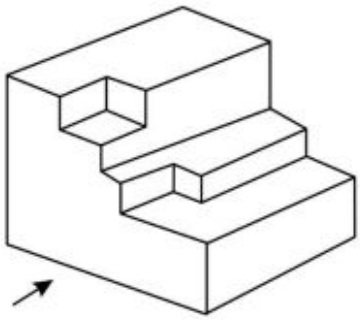
36669424634. 13

36669424635. 10

36669424636. 9

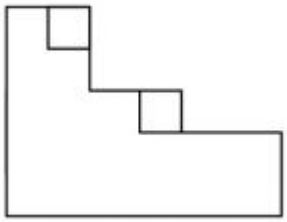
Question Number : 60 Question Id : 3666947758 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

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

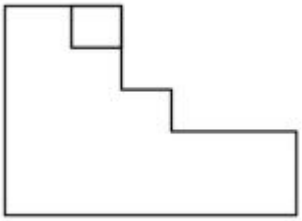


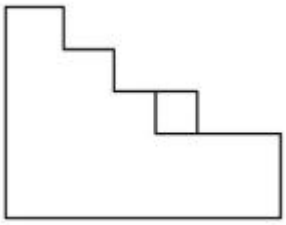
Options :

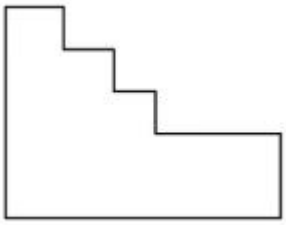
36669424637.



36669424638.

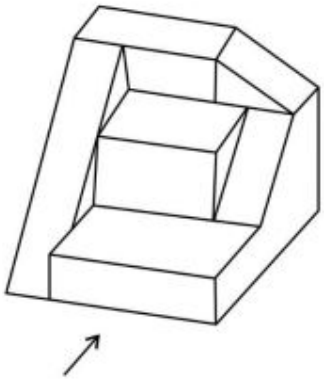


36669424639. 

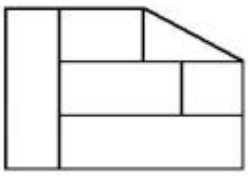
36669424640. 

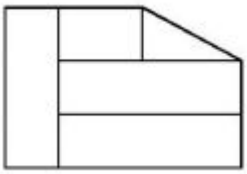
Question Number : 61 Question Id : 3666947759 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

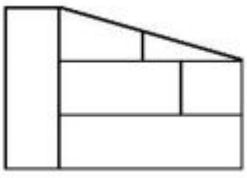
The 3D figure shows the view of an object. Identify the correct view looking in the direction of arrow, amongst the answer figures.

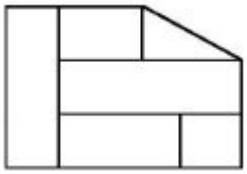


Options :

36669424641. 

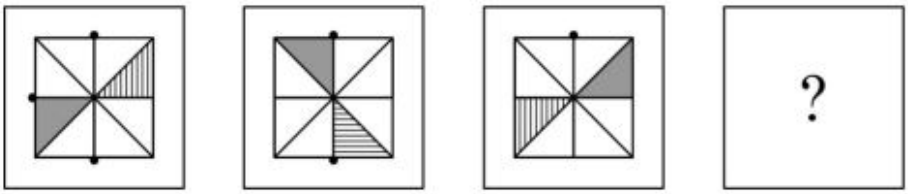
36669424642. 

36669424643. 

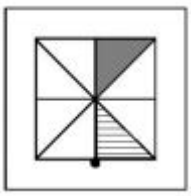
36669424644. 

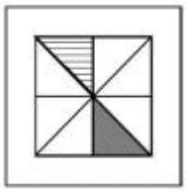
Question Number : 62 Question Id : 3666947760 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

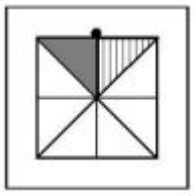
Choose the correct option from the answer figures which completes the sequence.

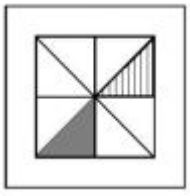


Options :

36669424645. 

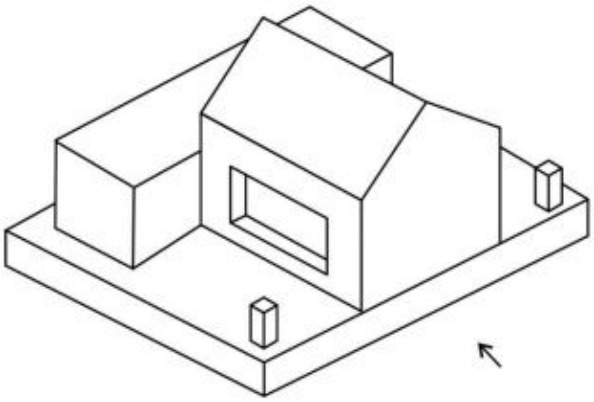
36669424646. 

36669424647. 

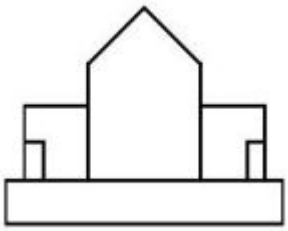
36669424648. 

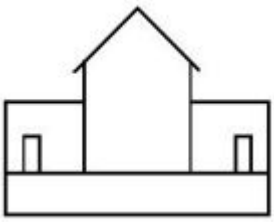
Question Number : 63 Question Id : 3666947761 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

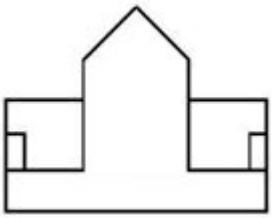
The question figure shows the 3D view of an object, identify the correct view looking in the direction of the arrow?

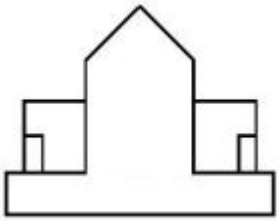


Options :

36669424649. 

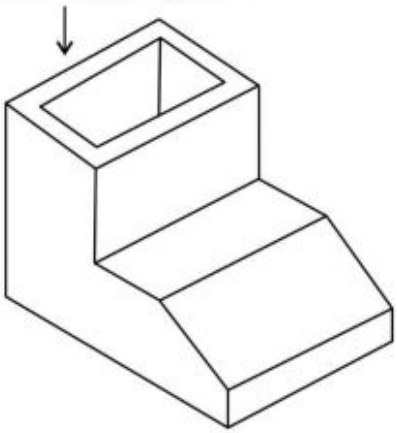
36669424650. 

36669424651. 

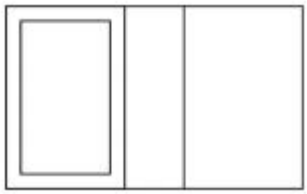
36669424652. 

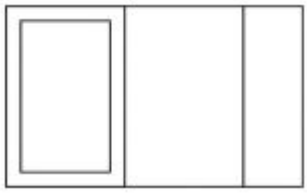
Question Number : 64 Question Id : 3666947762 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

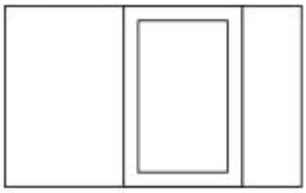
The question figure shows the 3D view of an object. Identify the top view of the object in the direction of the arrow.

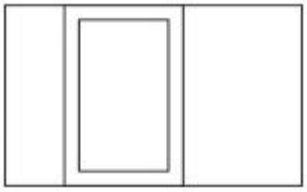


Options :

36669424653. 

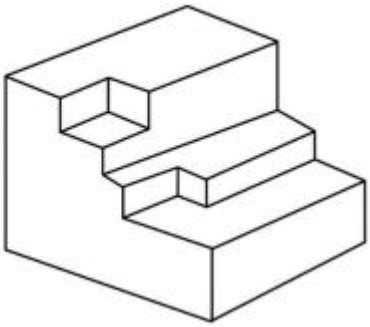
36669424654. 

36669424655. 

36669424656. 

Question Number : 65 Question Id : 3666947763 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the total number of surfaces in the given 3D object.



Options :

36669424657. 12

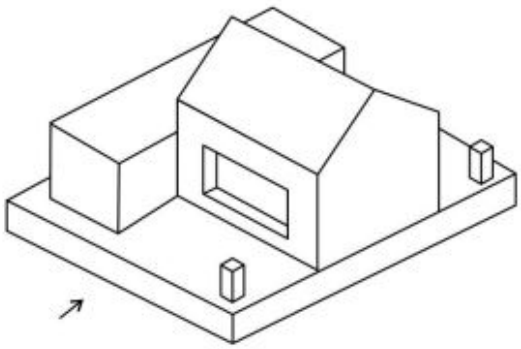
36669424658. 13

36669424659. 15

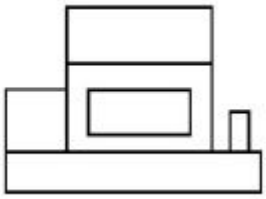
36669424660. 16

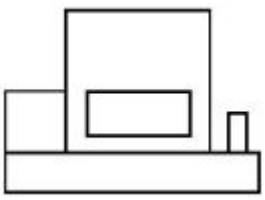
Question Number : 66 Question Id : 3666947764 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

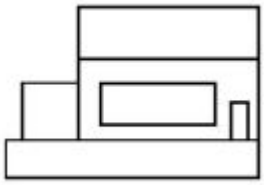
The question figure shows the 3D view of an object. Identify the correct view looking in the direction of the arrow.

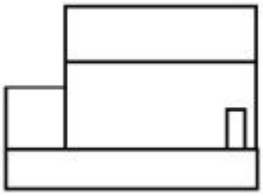


Options :

36669424661. 

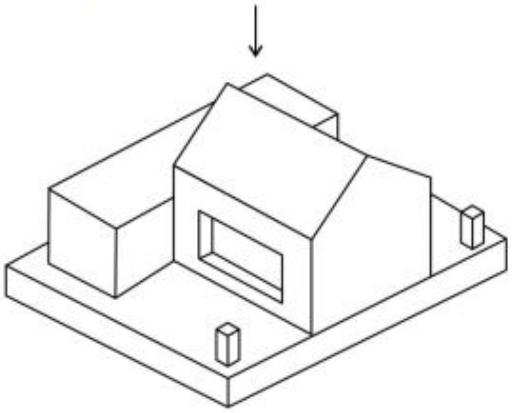
36669424662. 

36669424663. 

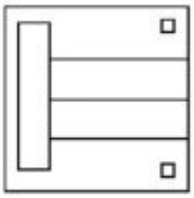
36669424664. 

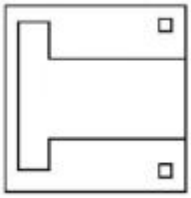
Question Number : 67 Question Id : 3666947765 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

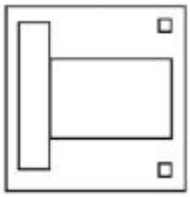
In the question figure it is a 3D view of an object. Identify the correct top view among the given options.

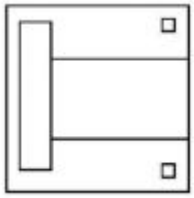


Options :

36669424665. 

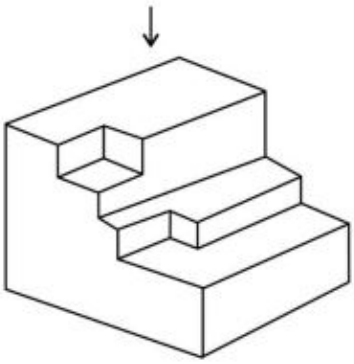
36669424666. 

36669424667. 

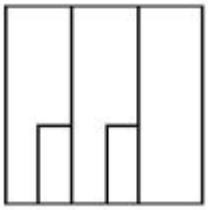
36669424668. 

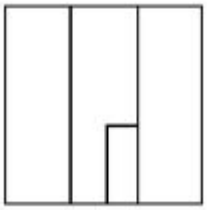
Question Number : 68 Question Id : 3666947766 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

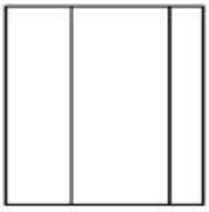
The question figure shows the 3D view of an object. Identify the most appropriate top view of the object from the given direction of the arrow.

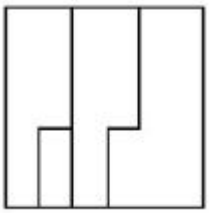


Options :

36669424669. 

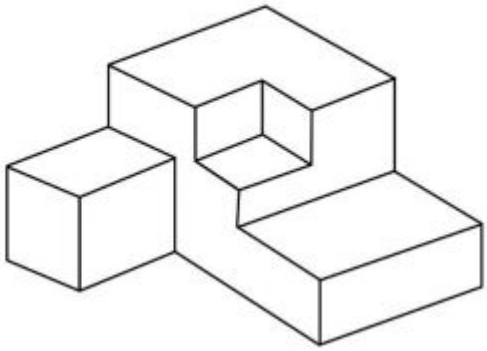
36669424670. 

36669424671. 

36669424672. 

Question Number : 69 Question Id : 3666947767 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the total number of surfaces in the given object.



Options :

36669424673. 13

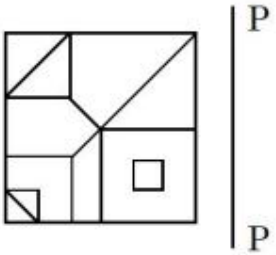
36669424674. 14

36669424675. 11

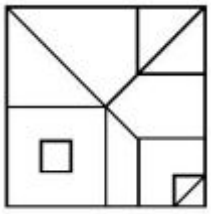
36669424676. 10

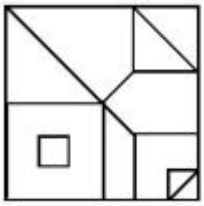
Question Number : 70 Question Id : 3666947768 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

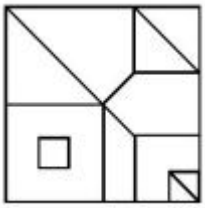
Identify the mirror image of the question figure, amongst the answer figures with respect to P-P.

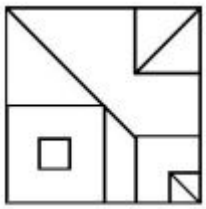


Options :

36669424677. 

36669424678. 

36669424679. 

36669424680. 

Question Number : 71 Question Id : 3666947769 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the correct mirror image of the question image with respect to P-P.



Options :

36669424681. 

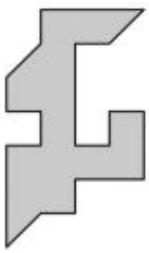
36669424682. 

36669424683. 

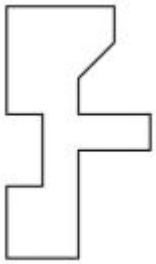
36669424684. 

Question Number : 72 Question Id : 3666947770 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

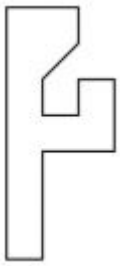
Which of the answer figures fit best to the left side of the given question figure?

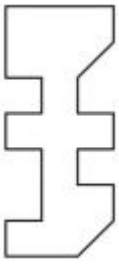


Options :

1. 

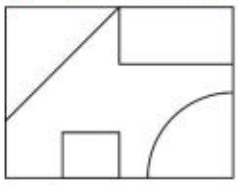
2. 

3. 

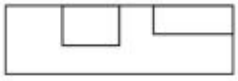
4. 

Question Number : 73 Question Id : 3666947771 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

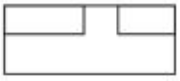
In the question figure, the top, front and right side view is given. Identify the most appropriate 3D view of the object from the answer figures.



Top view

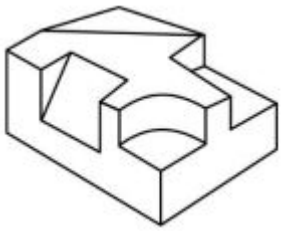


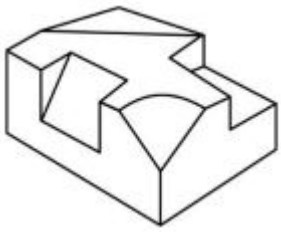
Front view

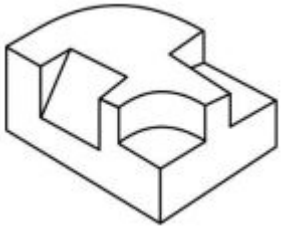


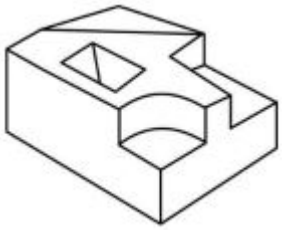
Right side view

Options :

36669424689. 

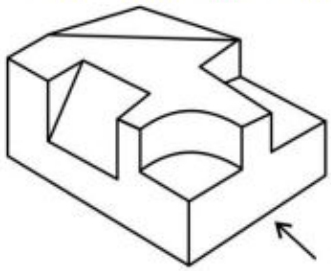
36669424690. 

36669424691. 

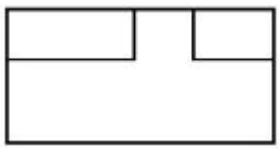
36669424692. 

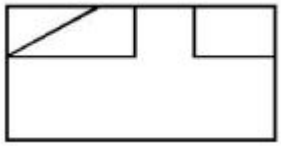
Question Number : 74 Question Id : 3666947772 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

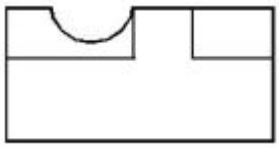
The question figure shows the 3D view of an object. Identify the most appropriate elevation (front view) looking in the direction of arrow.

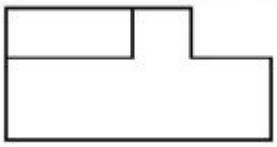


Options :

36669424693. 

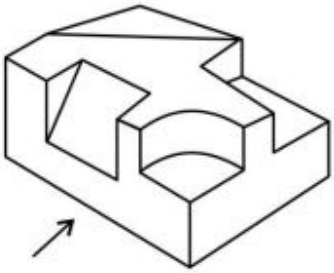
36669424694. 

36669424695. 

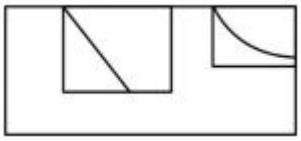
36669424696. 

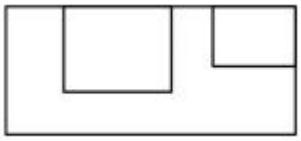
Question Number : 75 Question Id : 3666947773 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

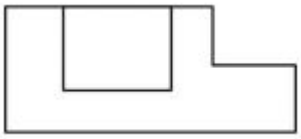
The question figure shows the 3D view of an object. Identify the most appropriate view of the object looking in the direction of the arrow.

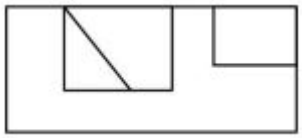


Options :

36669424697. 

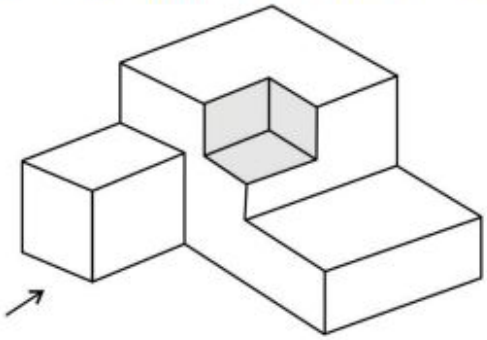
36669424698. 

36669424699. 

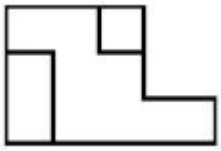
36669424700. 

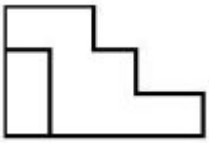
Question Number : 76 Question Id : 3666947774 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

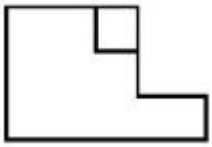
The question figure is the 3D view of an object. Identify the most appropriate front view of the object looking in the direction of the arrow.

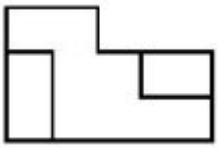


Options :

36669424701. 

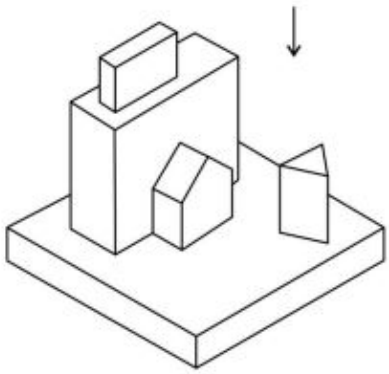
36669424702. 

36669424703. 

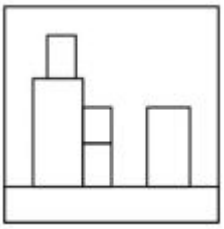
36669424704. 

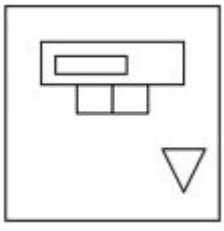
Question Number : 77 Question Id : 3666947775 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

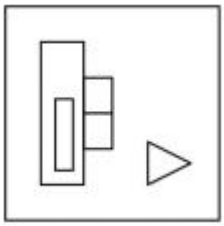
Question figure shows 3D view of an object. Identify the most appropriate top view of the given 3D object looking in the direction of an arrow, from the given answers figures.

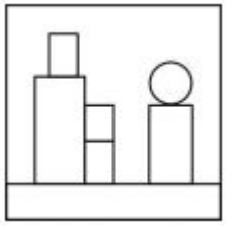


Options :

36669424705. 

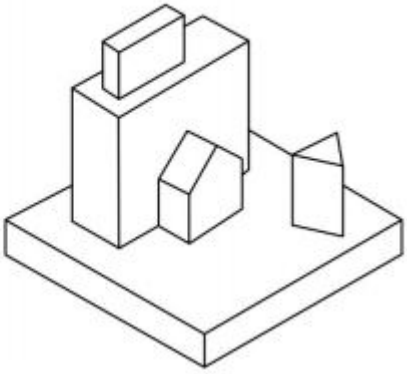
36669424706. 

36669424707. 

36669424708. 

Question Number : 78 Question Id : 3666947776 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Identify the number of surfaces in the problem figure.



Options :

36669424709. 24

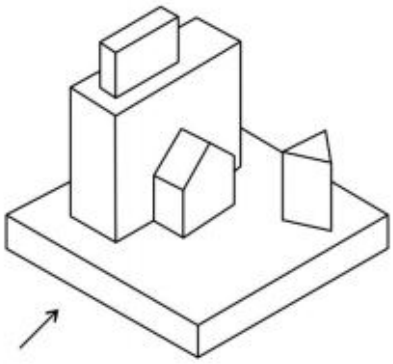
36669424710. 25

36669424711. 23

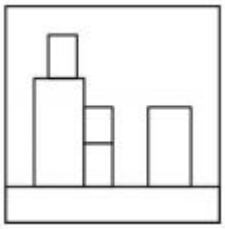
36669424712. 20

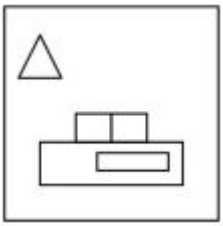
Question Number : 79 Question Id : 3666947777 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

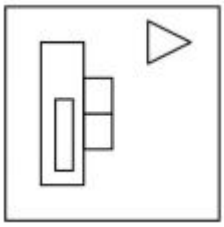
The question figure shows 3D view of an object. Identify the most appropriate elevation of the given 3D object, looking in the direction of an arrow, from the given answer figures.

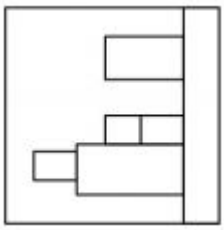


Options :

36669424713. 

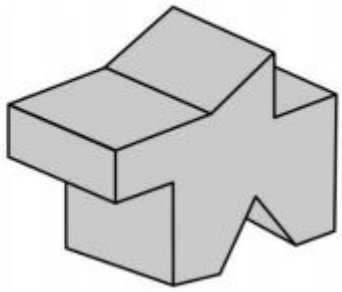
36669424714. 

36669424715. 

36669424716. 

Question Number : 80 Question Id : 3666947778 Question Type : MCQ Correct Marks : 4 Wrong Marks : 1

Find out the total number of surfaces of the 3D object.



Options :

36669424717. 12

36669424718. 13

36669424719. 14

36669424720. 15

Drawing

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

Question Number : 81 Question Id : 3666947779 Question Type : SUBJECTIVE Correct Marks : 50 Wrong Marks : 0



Draw the Sketch of the given image in detail.

Question Number : 82 Question Id : 3666947780 Question Type : SUBJECTIVE Correct Marks : 50 Wrong Marks : 0

Create an interesting sculpture, using basic 3D shapes of sports elements eg. different Balls, Bats etc. You can scale each object to any size of your choice, and use them as per your choice. Draw the effect of light and shadow on your composition. Use colours of your choice.