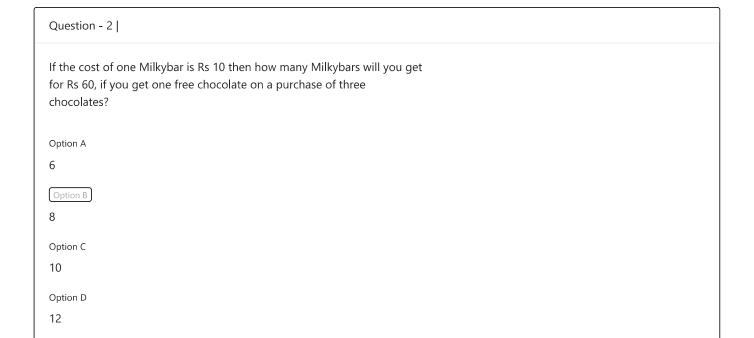
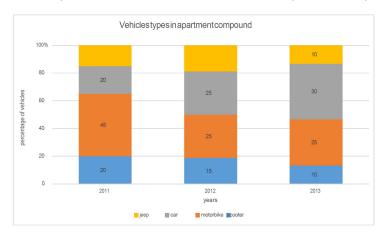
Questions National Level Maths Olympiads - Level 2

Question - 1 CTU buses leave Chandigarh Bus Stand after every 30 minutes. A passenger asked at the enquiry desk about the bus timings. The clerk told him that the bus had already left ten minutes ago and next bus will be leaving at 9.35 am. At what time did the clerk give this information to the passenger? Option A 9:10 am Option B 9:05 am Option C 8:55 am Option D 9:15 am



The chart below shows the types of vehicles, by percentage, in a large apartment compound from 2011 to 2013.

For example, in 2011, 15% of the total vehicles in the apartment compound were jeeps.



What is the difference in the percentage of Motorbikes in the apartment compound between the year 2011 and the year 2013?

Option A

35%

Option B

25%

Option C

20%

Option D

10%

Question - 4 |

Pointing to a man in a photograph, a woman says, "He is the only son of the only daughterinlaw of my only son's father." How is the man related to the woman?

Option A

Son

Option B

Father

Option C

Son-in-law

Option D

Grandson

Three different positions of a dice are given below:







Which number is on the face opposite to 1?

Option A

6



2

Option C

3

Option D

5

Question - 6

The digits of each of the following five numbers are written in reverse order and five new numbers are obtained:

513 726 492 865 149

Which of the following will be the third digit of the second highest new number?

Option A

1

Option B

5

Option C

7

Option D

The area of a rectangle is given by $\,6x^2y+4y^2x\,$ and the width of the rectangle is given by 2xy. Find the perimeter of rectangle.

Option A

6x + 8y + 2xy

Option B

3x + 4y + 2xy

Option C

8x + 6y + 4xy

Option D

6x + 4y + 4xy

Question - 8 |

In a class of 100 students, 30% of the students offered English, 20% offered Hindi. If a student is selected at random, then what is the probability that he has offered English?

Option A

2/5

Option B

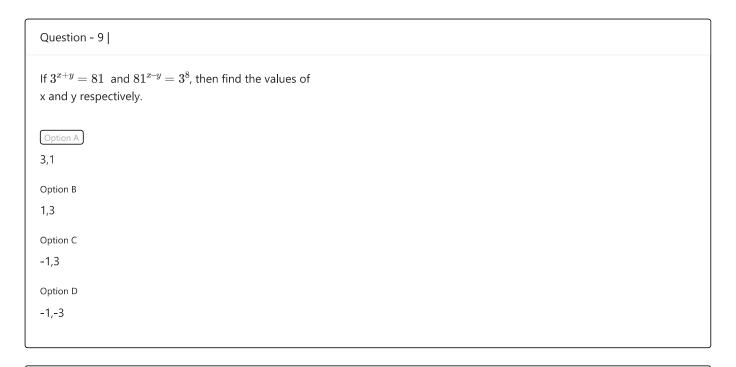
3/4

Option C

3/5

Option D

3/10



Question - 10 |

Sanket earns twice as much in the month of March as in each of the other months of the year. What part of his entire annual earnings was earned in March?

Option A

1/7

Option B

1/6

Option C

2/11

Option D

2/13

Question - 11	
The total of the ages of Jiya, Kunal and Sagar is 93 rears. Ten years ago, the ratio of their ages was 2 : 3 : 4. What is the present age of Sagar?	
Option A	
24 years	
Option B	
32 years	
Option C	
34 years	
Option D	
88 years	

Select the INCORRECT match.

Shape	Faces	Vertices		
	7	10		

(B)		10	16	24
	EL 1 13			

Edges

15

(C)		7	7	14
(0)	⟨·/·····/·····}	•	# The state of the	

(D)	5	5	8
(0)	O	0	O

Option A

Α

Option B

В

Option C

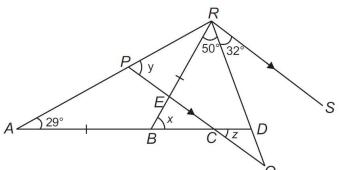
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Option D

D

Question - 13 |

In the given figure (not drawn to scale), BA = BR



and PQ is parallel to RS. Find x, y and z.

X	y	Z	
(A) 58°	69°	40°	
(B) 58°	40°	30°	
(C) 48°	59°	70°	
(D) 69°	40°	58°	

Ontion A

Α

Option B

В

Option C

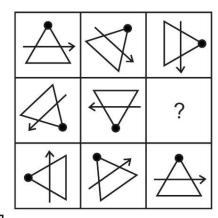
C

Option D

D

Question - 14 |

Find the missing figure in the given figure matrix.



(A)



(B)



(C



(D



Option A

Α

Option B

В

Option C

C

Option D

D

Question - 15 |

If '+' means ' \div ', '-' means ' \times ', ' \div ' means '+' and ' \times ' means '-', then 320 \div 225 + 15 \times 15 - 85 = ?

Option A

180

Option B

140

Option C

60

Option D

-940

Question - 16			

Solve for x :

 $\frac{1}{5}(x-8) + \frac{4+x}{4} + \frac{x-1}{7} = 7 - \frac{23-x}{5}.$

Option A

7

Option B

8

Option C

5

Option D

9

Question - 17 |

If 55% of 1000 \div 60% of 2000 = k: 2k + 2, then find the sum of digits of k.

Option A

4

Option B

2

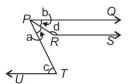
Option C

5

Option D

Question - 18 |

In the given figure, PQ, RS and UT are parallel lines. If $c = 75^{\circ}$ and a = (2/5)c, then find the value of b + d/2.



Option A

92°

Option B

115°

Option C

112.5°

Option D

135.5°

Question - 19

Garima and Mohit deposited Rs 3000 and Rs 4000 in a company at the rate of 10% per annum for 3 years and 2 1/2 years respectively. The

difference of the amounts received by them will be

Option A

Rs 100

Option B

Rs 1000

Option C

Rs 900

Option D

Rs 1100

At Shimla, the temperature was –7°C on Tuesday. It then dipped by 3°C on Wednesday. On Thursday, it rose by 6°C. What was the temperature of Shimla on Wednesday and Thursday respectively?

Option A

- 4°C, −10°C

Option B

−10°C, − 4°C

Option C

–12°C, 8°C

Option D

−10°C, 4°C

Question - 21 |

Read the given statements carefully and select the correct option.

Statement I: If four quantities a, b, c and d are such that the ratio a: b is equal to the ratio c: d, then we say a, b, c and d are in ratio and a:b:c:d.

Statement II: If a: b = 5:9 and b: c = 4:7,

then a:b:c=20:36:63.

Option A

Both Statement I and Statement II are true.

Option B

Statement I is true but Statement II is false.

Option C

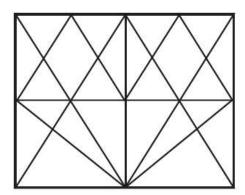
Statement I is false but Statement II is true.

Option D

Both Statement I and Statement II are false.

Question - 22 |

Find the minimum number of straight lines required to draw the given figure.



Option A

15

Option B

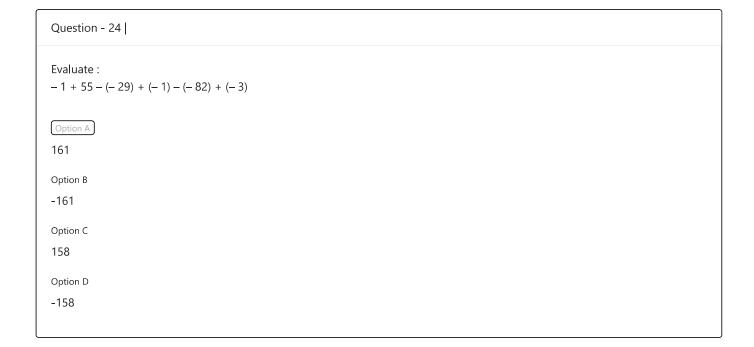
16

Option C

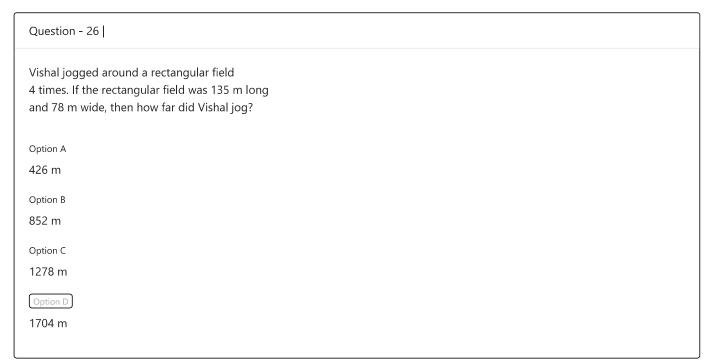
14

Option D

Question - 23 | How many dots lie opposite to the face having four dots, when the given net of cube is folded? Option A 2 Option B 1 Option C 5 Option D



Question - 25	
On a hill, the temperature at 8 p.m. was 2°C but at the mid-night of the same day, it fell down to –3°C. By how many degrees did the temperature fall?	
Option A 6°C	
Option B 5°C	
Option C 2°C	
Option D	
3°C	



The given table shows the temperature of a city for 7 consecutive hours.

Hour	1	2	3	4	5	6	7
Temperature (°C)	-6	15	-2	23	12	0	-4

Calculate the difference between the highest and the lowest temperature of the city over the 7 hour period.

Option A

17°C

Option B

29°C

Option C

21°C

Option D

25°C

Question - 28

Following figures are formed by joining six unit squares. Which figure has the smallest perimeter in Fig.









Option A

Α

Option B

В

Option C

C

Ontion D

D

Question - 29 | Two regular Hexagons of perimeter 30cm each are joined as shown in Fig. The perimeter of the new figure is Option A 65cm Option B 60cm Option C 55cm Option D

Question - 30 | The instrument in the geometry box having the shape of a triangle is called a Option A Protractor Option B Compasses Option C Divider Option D Set-square