RPF SI 6th Jan 2019 Shift 1

1. Who gave the slogan 'Give me blood, I will give you freedom'?

A   Jawaharlal Nehru

B   Mahatma Gandhi

C   **Subhash Chandra Bose**

D   Bal Gangadhar Tilak

Solution

'Give me blood, I will give you freedom' slogan was given by Subhash Chandra Bose.

2. **Of these, who are not the Deputy Governor of RBI?**

A   **V.K. Sharma**

B   V. Liladhar

C   MK. Jain

D   BP Kanungu

Solution

V.K. Sharma is not the Deputy Governor of RBI.

3. _ is a process of energy production with the help of respiratory oxygen.

A **Aerobic (aerobic)**

B Anaerobic

C Autotrophic

D Infertility (heterotrophic)

Solution

Aerobic is a process of energy production with the help of respiratory oxygen.

4. **Sunil Chhetri is related to which game / sports?**

A Football

B Volleyball

C Basketball

D Baseball

Solution

Sunil Chhetri is related to Football

5. **Which of the following crop is not grass?**

A **Almond**

B SubA

C Bamboo

D Alfalfa

Solution

Almond is not grass.

6. Who won men's singles title at the 2018 US Open?

A	Roy Emerson

B	**Novak Djokovic**

C	Rafael Nadal

D	Roger Federer

Solution

Novak Djokovic won men's singles title at the 2018 US Open

7. **Which of the following years has been declared by the United Nations as the International Year of Forests?**

A 2015

B 2009

C **2011**

D 2008

Solution

2011 has been declared by the United Nations as the International Year of Forests

8. **As the droplets of water are said to be free of moisture**

A) Humidity

B) Bala

C) **Rain**

D) Fog

Solution

As the droplets of water are said to be free of moisture in Rain.

9. **Which organization was replaced by the Planning Commission of India?**

A Regional Council

B **Policy Commission**

C Energy and Resources Institute

D Securities and Exchange Board of India

Solution

Policy Commission was replaced by the Planning Commission of India.

10. What is the currency of Malaysia?

A   Malaysian Dinar

B   Malaysian Dollars

C   Malaysian Euro

D   **Malaysian Ringgit**

Solution

The currency of Malaysia Ringgit.

11. **Where is the "National Management Institute (NIBM)" located?**

A Nagpur

B Mumbai

C **Pune**

D Hyderabad

Solution

National Management Institute (NIBM) located in Pune.

12. What is the full form of KCL in electricity?

A Kirchoff's Conductive Rule

B Kirchhof's Converter Rule

C Kirchoff's Circuit Rule

D **Kirchoff's stream rule**

Solution

KCL in electricity means Kirchhoff's Current Law, so optional 1 is correct.

13. Which freedom fighter is popularly known as Lok Nayak?

A   Jyotirao Phule

B   Jatindranath Das

C   Jyotiba

D   **Jaiprakash Narayan**

Solution

Jaiprakash Narayan is popularly known as Lok Nayak.

14. **Has the President of India declared so far a financial emergency?**

A **Never Announced**

B Yes, only once

C Yes, two times

D Yes, three times

Solution

President of India never declared a financial emergency.

15. **When was the Lahore session held?**

A 1820

B **1929**

C 1940

D 1945

Solution

Lahore session was held in 1929.

16. **Against which team did Sachin Tendulkar make his 100th international century?**

A Pakistan

B Australia

C **Bangladesh**

D South Africa

Solution

Sachin Tendulkar make his 100th international century against Bangladesh.

17. **In which of the following countries is the St George Park Stadium located?**

A Zimbabwe

B **South Africa**

C United States

D West Indies

Solution

St George Park Stadium is located at South Africa.

18. **What is the formula for Plaster of Paris?**

A G_2 Kl / $2H_2O$

B G_2Kl / $2H_2$ O

C $CaSO_4$ Kl / $2H_2O$

D $CaSO_4$

Solution

Plaster of Paris is also known as Gypsum Plaster.

Chemically it is called as "Calcium sulfate hemihydrate". It is a white powdery slightly hydrated calcium sulfate. It is produced by heating Gypsum

19. **When was the Singh Sabha movement formed in Amritsar?**

A 1997

B 1830

C **1873**

D 1920

Solution

Singh Sabha movement formed in Amritsar in 1873.

20. **On high temperatures, gas-melt rock content located below the surface of the Earth is called _____**

A Hot Spring (Hot Waterfall)

B Lava

C Mica (Asbestos)

D **Magma**

Solution

Gas-melt rock content located below the surface of the Earth is called Magma.

21. **Which list of constitution gives the list of states and union territories?**

A Tenth Schedule

B Second Schedule

C Seventh Schedule

D **First Schedule**

Solution

List of constitution gives the list of states and union territories is First Schedule

22. **Who was the leader of the Munda Rebellion between 1875-1900?**

A   **Birsa Munda**

B   Raghava Munda

C   Balavid Munda

D   Rajesh Munda

Solution

Birsa Munda was the leader of the Munda Rebellion between 1875-1900.

23. Who is the author of the drama 'Shakuntala'?

A Amar Singh

B Cone

C Varachichi

D **Kalidas**

Solution

Kalidas is the author of the drama 'Shakuntala'.

24. **Asia Cup belongs to which of the following sports?**

A   Underwater Hockey

B   **Cricket**

C   Rugby

D   Baseball

Solution

Asia Cup belongs to Cricket.

25. **Which of these is not a classical dance?**

A Manipuri

B Odyssey

C **Rasali**

D Kuchipri

Solution

Rasali is not a classical dance.

26. **How much is the tenure of Chief Election Commissioner's office?**

A **Six years**

B Three years

C Five years

D Four years

Solution

The tenure of Chief Election Commissioner's office is six years.

27. Where is the Sahara desert located in the following countries / continents?

A South America

B North America

C China

D **North Africa**

Solution

Sahara desert located in the North Africa.

28. Which one of the following devotional saints have projected the philosophy of Confirmation?

A **Vallabhacharya**

B Sadhna

C Madhavacharya

D Ramanand

Solution

Vallabhacharya projected the philosophy of Confirmation.

29. **What is the mass of the moon?**

A **7.347 x 10^{22} kg**

B 7.347 x 10^{26} kg

C 6.347 x 10^{24} kg

D 6.347 x 10^{22} kg

Solution

The moon's mass is 7.35 x 10^{22} kg, about 1.2% of Earth's mass.

In another way, Earth weighs 81 times more than the moon.

The Moon is about one-fourth (or a quarter) the size of Earth in width.

30. **Which of the following languages has been declared as the official language of the Government of India?**

A Bengali

B Telugu

C Tamil

D **Hindi**

Solution

Hindi has been declared as the official language of the Government of India.

31. Prime Minister is the leader of the _____

A   Majority party in Rajya Sabha

B   None of these

C   Majority party in parliament

D   Majority party in Lok Sabha

Solution

Prime Minister is the leader of the Majority party in Lok Sabha.

32. **Mughal miniature painting reached its peak during the rule of _**

A **Jahangir**

B Aurangzeb

C Shah Jahan

D Akbar

Solution

Mughal miniature painting reached its peak during the rule of Jahangir

33. _____ **Was the first president of the Rajya Sabha.**

A Neelam Sanjiva Reddy

B V.V. Nair

C Dr. Zakir Hussain

D **Dr. S. Radhakrishnan**

Solution

Dr. S. Radhakrishnan was the first president of the Rajya Sabha.

34. Term of President's office is _____

A   Six years

B   Not defined duration

C   **Five years**

D   Four years

Solution

Term of President's office is five years.

35. According to the 2011 census, which of the following states of India is the lowest sex ratio?

A   Sikkim

B   Bihar

C   **Haryana**

D   Kerala

Solution

According to the 2011 census, which of the Haryana is the state with lowest sex ratio.

36. **Which of the following is the least densely populated place in the world?**

A Jarvis Island

B **Greenland**

C Bermuda

D Hogggo

Solution

Greenland is the least densely populated place in the world.

37. **The crops sown during the winter season are called _ crops.**

A Kharif

B **Rabi**

C Faber / Spade

D Weird

Solution

The crops sown during the winter season are called Rabi crops.

38. **Ukai Dam is located in __**

A Manipuri

B Punjab

C Tripura

D **Gujarat**

Solution

Ukai Dam is located in Gujarat.

39. **Hornbill festival is celebrated in which of the following states?**

A **Nagaland**

B Kerala

C Karnataka

D Mizoram

Solution

Hornbill festival is celebrated in Nagaland.

40. **What is the expansion of "ESIC"?**

A Employees' State India Corporation

B **Employees' State Insurance Corporation**

C Employees' State Information Corporation

D Employees' State Insurance Council

Solution

The full form of ESIC is Employees' State Insurance Corporation.

41. **The Speaker of Lok Sabha is elected by ___**

A **All Members of the Lok Sabha**

B People directly

C All Members of Parliament

D Chief Justice of India

Solution

The Speaker of Lok Sabha is elected by all Members of the Lok Sabha

42. Sunderban National Park is located in __

A   Madhya Pradesh

B   Bihar

C   **West Bengal**

D   Uttar Pradesh

Solution

Sunderban National Park is located in West Bengal

43. **Which of the following is India's 29th state?**

A   Goa

B   **Telangana**

C   Mizoram

D   Jharkhand

Solution

Telangana is India's 29th state.

44. **What is the formula for "frequency" (Frequency)?**

A **1 ÷ Covered Period**

B Recurring Period ÷ 2

C Recurring Period

D Recurring Time ÷ 4

Solution

Frequency of a signal is, 1 ÷ Covered Period

45. **Which of the following is the natural source of lactic acid?**

A   Tomato

B   Potatoes

C   Ant Sting

D   **Milk**

Solution

Milk is the natural source of lactic acid.

46. **What is the capital of Canada?**

A   Beijing

B   Georgetown

C   Santiago

D   **Ottawa**

Solution

Ottawa is the capital of Canada.

47. Which is the capital of Punjab?

A Chandigarh

B Ludhiana

C CoverStory

D Itanagar

Solution

Chandigarh is the capital of Punjab.

48. **What is the nickname of hockey player Major Dhyan Chand?**

A Jamie

B Wall (The Wall)

C Flyer (Flying Man)

D **Magician (Wizard)**

Solution

Nickname of hockey player Major Dhyan Chand is Magician (Wizard).

49. **The number of nominated members in the Lok Sabha by the President is _____**

A 2

B 4

C 12

D 1

Solution

The number of nominated members in the Lok Sabha by the President is 2.

50. What is the atomic number of helium?

A 3

B 1

C 4

D 2

Solution

Atomic number of helium is 2.

51. In this question, after two statements i and II two conclusions have been given. Assuming the given given in the statement together as truth, consider both the findings together and decide on which one of them follows beyond the logical and appropriate skepticism based on the information given in the statement.

Statement: Some papers are pen. All pencils are pen.

Conclusion:
i) Some pencils are papers
ii) Some pen are pencils
One of the following options to choose appropriate
(A) only follows conclusion I
(B) only follows conclusion II
(C) either follow I or II the
(D) neither I nor II follows
(E) I and II both follow

A D

B A

C B

D C

Solution

Since some papers are pen and all pencils are pen, some pen are pencils, so option B is correct.

52. **Read the following statement and answer the following question.**

A @ B means A is the mother of B

A # B, which means A is father of B

A $ B means A, B's brother

A% B means A, B's sister

Which of the following shows that 'P '' R 'is aunt'?

A   **P% Q # R**

B   P% Q @ R

C   Q% P # R

D   P @ Q @ R

Solution

P% Q means P is the sister of Q. Q # R means Q is the father of R, so P is the aunt of R.

53. According to the logic used in the first pair, replace the question mark with the appropriate option given to

Cytology: Cells :: Entomology: ??

A Viruses

B **Insects**

C Soil

D Tissues

Solution

Entomology is the study of Insects.

54. In any code language, if **MORTAL** is coded as **VSQPEX**, what will be the code of **GARDEN** in that language?

A VEKIRH

B **VEKRIH**

C KEVIHR

D KVEHRI

Solution

M O R   T A L

X   +4   X   +4

V S Q   P E X

Similarly,

G A R   D E N

X   +4   X   +4

V E K   R I H

Hence, 'VEKRIH' is the correct answer.

55. Select the correct option from the following options which could create a full square (3 out of 5 images below):

(1)   (2)   (3)   (4)   (5)
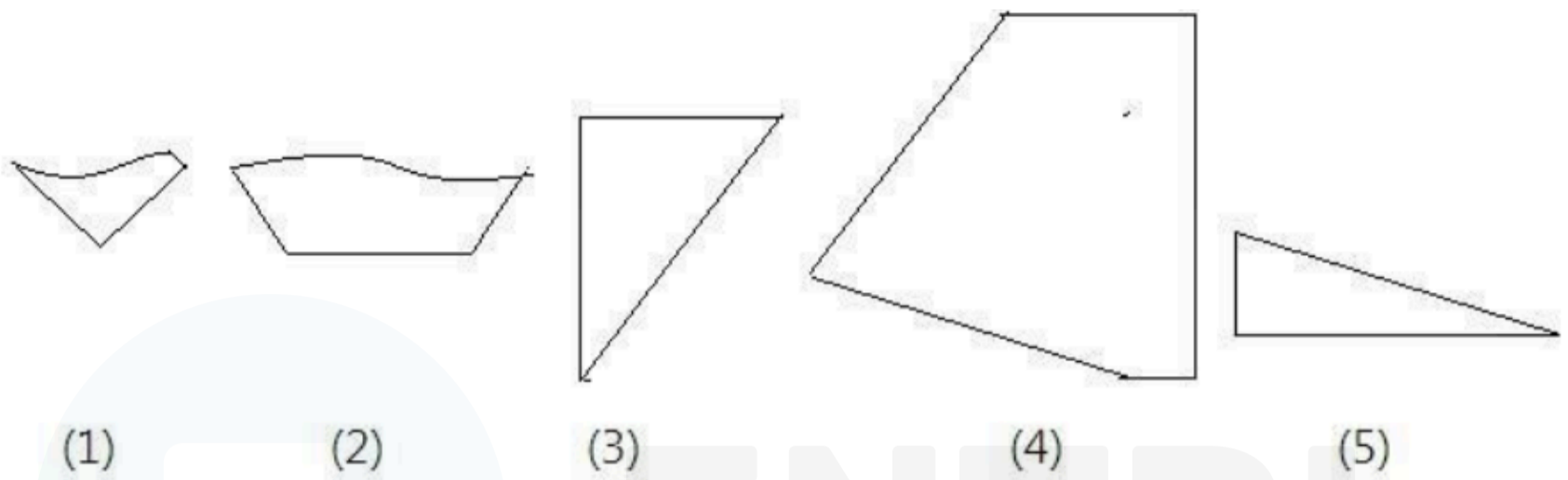
A 1,3,5

B 2,4,5

C 3,4,5

D 2,3,4

Solution

Figures 3,4 and 5 can be used to create a full square.

56. In this question, the relationship between different elements has been shown in the statement.

After the statement, two conclusions have been given:

Statement: $C \leq O > N \geq L = U < S \leq I < K$

Conclusions:

i) $C \leq U$

ii) $C > U$

Choose a suitable one of the following options

(A) only conclusions i follows

(B) only conclusions iI follows

(C) either i or ii follows

(D) neither i nor ii follows

(E) i and ii both follow

A   A

B   C

C   B

D   D

Solution

From the given statement, either i or ii follows.

57. Four of the following five are somehow similar and therefore create a group. Which of these is not related to this group?

BFJ, MQU, KPU, JNR, LPT

A   MQU

B   **KPU**

C   LPT

D   BFJ

Solution

BFJ → B + 4 = F; F + 4 = J

MQU → M + 4 = Q; Q + 4 = U

KPU → K + 5 = P; P + 5 = U

JNR → J + 4 = N; N + 4 = R

LPT → L + 4 = P; P + 4 = T

Hence, 'KPU' is the odd one out.

58. In accordance with the logic used in the first pair, replace the question mark with the appropriate option given to 4441: 13 :: 3136: ??

A	14

B	21

C	15

D	**13**

Solution

Sum of digits of 4441 is 13, similarly, sum of digits of 3136 is also 13.

59. **Find the upcoming numbers in this series.**

19, 28, 46, 82, 154,?

A   **298**

B   308

C   328

D   318

Solution

The pattern of the series is,

$19 + 9 = 28$
$28 + 18 = 46$
$46 + 36 = 82$
$82 + 72 = 154$
$154 + 144 = 298$

60. Four of the following five are somehow similar and therefore create a group. Which of these is not related to this group?

Wander, Saunter, Roam, Stride, Stammer

A   Stride

B   Wander

C   Saunter

D   **Stammer**

Solution

All words except 'Stammer' are synonyms of each other.

61. Carefully read the given information and answer the questions as per the following. 6 students Anil, Sita, Mansi, Kajal, Govind and Varu sit around looking around the center of a circular table (not necessarily in the same order). All six students prefer different subjects such as mathematics, physics, history, geography, chemistry and biology.

i) The mathematics that likes it sits between the mascara and the mansi.

ii) The person who likes Chemistry is at the third position on the right side of Kajal.

iii) Varu, who is not a neighbor of Govind, likes biology.

iv) Kajal sits immediately on the left side of Varu.

v) Govind does not like mathematics.

vi) Sita is at the third position on the right side of the person who likes history.

vii) Who likes physics and who like biology are neighbors

Which of the following statements is correct in relation to the system?

A   Anil sits in the second position on the right side of Govind

B   Mascara likes Chemistry

C   Sita and Anil are neighbors

D   Who likes chemistry sits between Anil and Mansi

Solution

As per the given information, the final arrangement is,
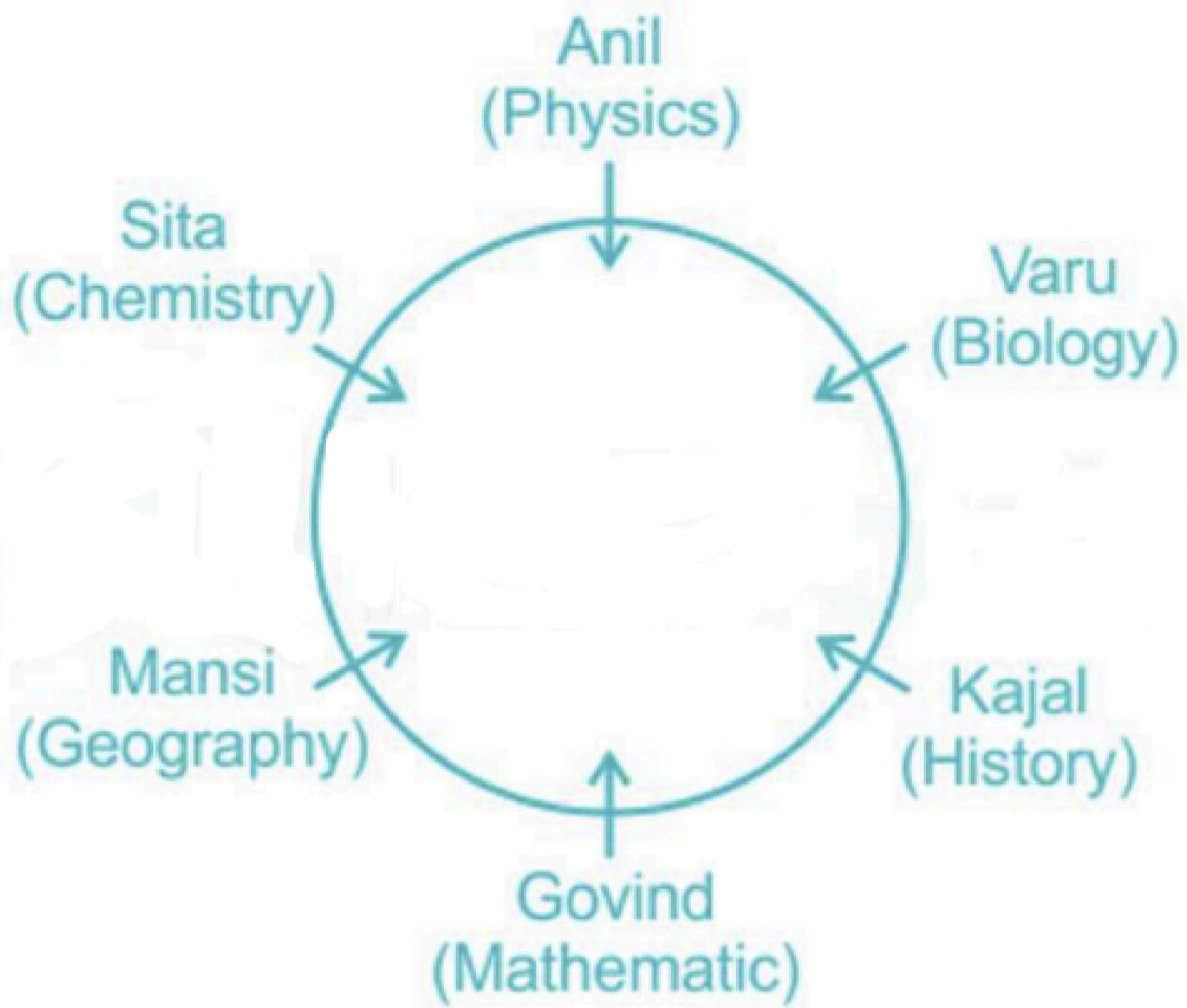
Hence, option D is the correct answer

62. In this question, after three statements four conclusions have been given. Considering the given given in the statement together, consider the findings together and decide on which one of them follows beyond the logical and appropriate skepticism based on the information given in the statement.

Statement: All boys are children. All the kids are beautiful. Some girls are girls.

Conclusion:

i) All children are boys

ii) Some girls are beautiful

iii) Some boys are girls

iv) all boys are beautiful

A	Only ii) and iv)

B	I only), ii) and iii)

C	Only i)

D	All Follow

Solution

From the given statements, ii and iv follow.

63. According to the given figure, each side of the dice is painted with purple, red red, yellow, blue, gray and orange. What color is painted in contrast to the red color?
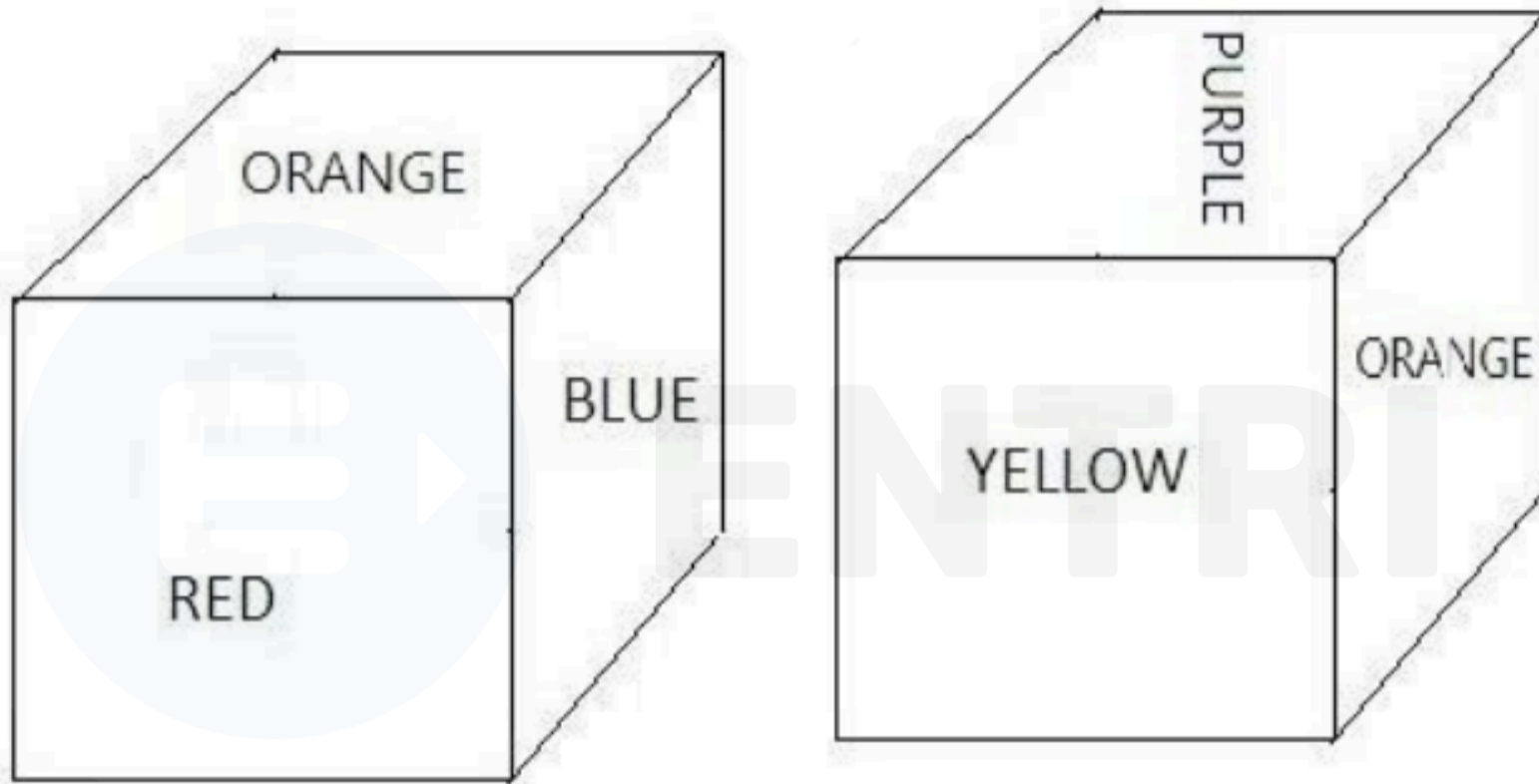
A Sentinel

B Purple

C Yellow

D Blue

Solution

As per the given figure, the color contrast to the red color is Purple.

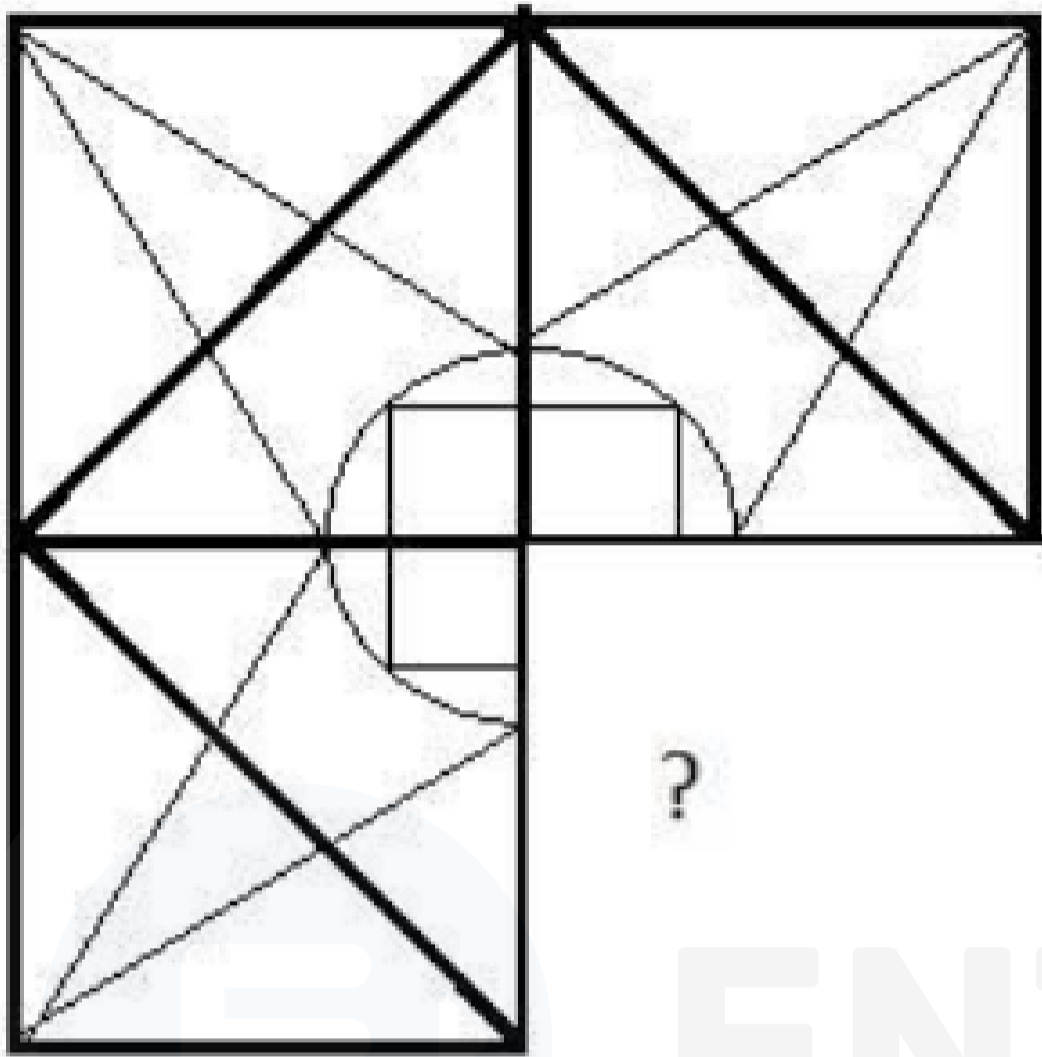**64. How many simple lines are there in the given image?**
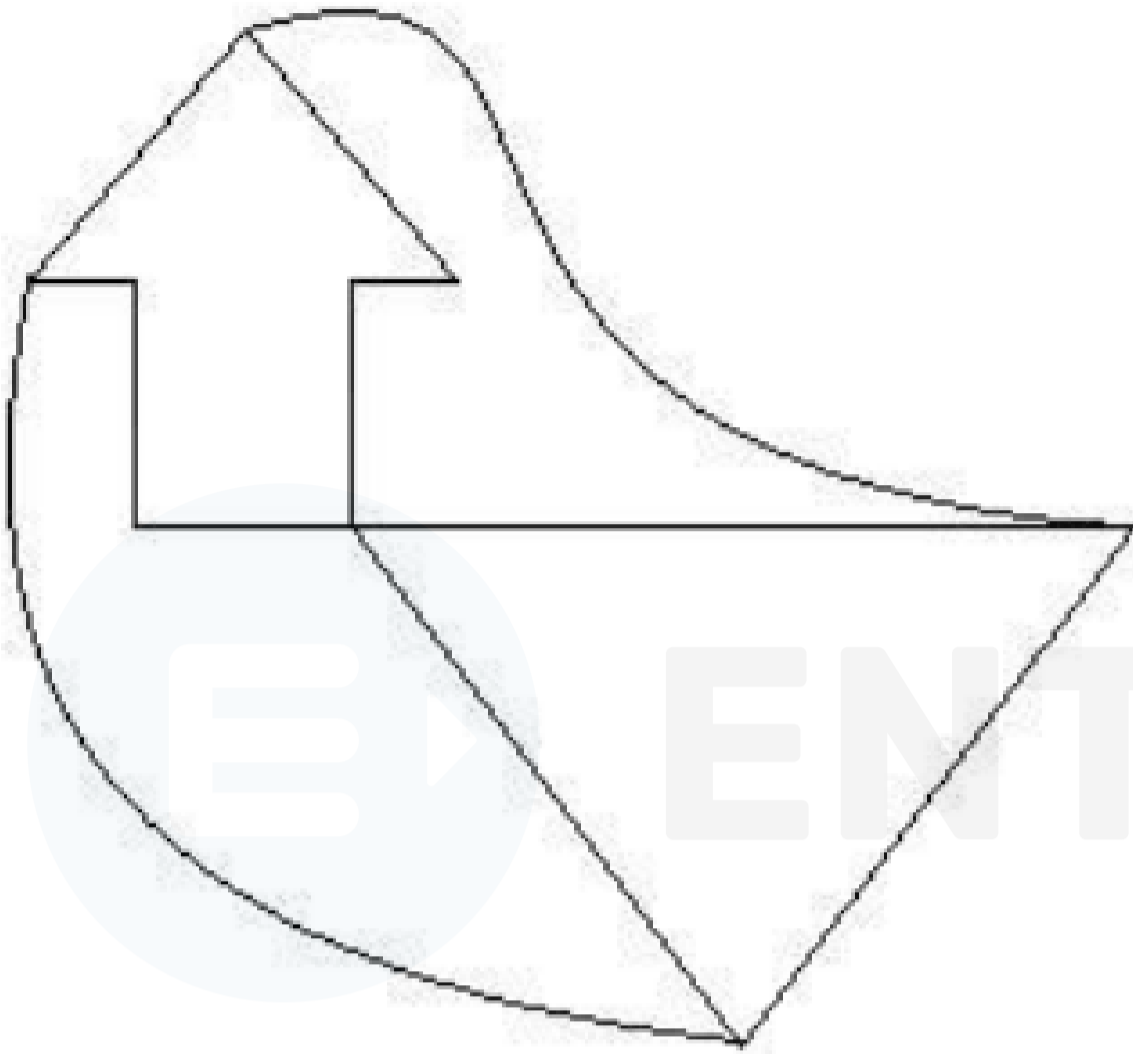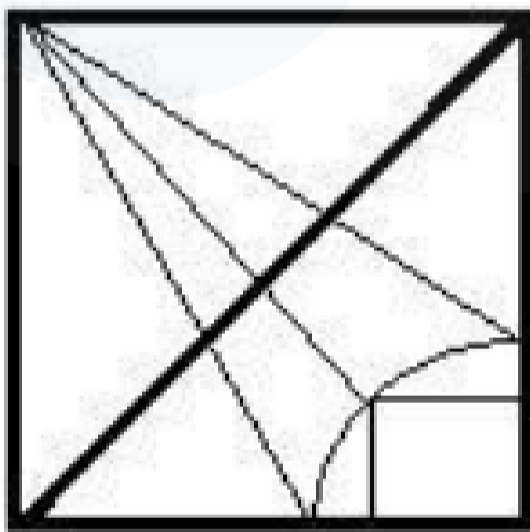

A   **11**

B   12
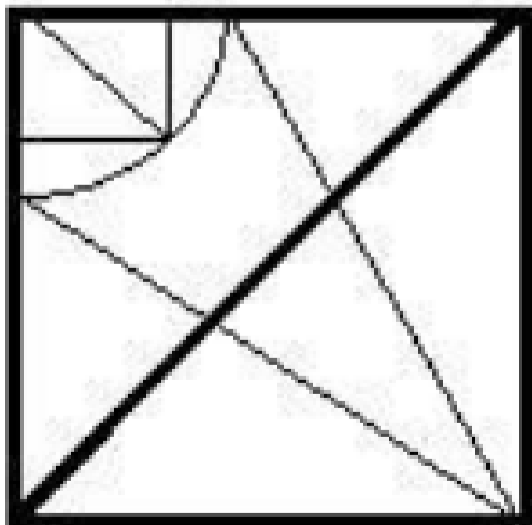
C   9

D   8

Solution

There are 11 lines in the given image.

65. Choose the correct option that can meet the image pattern of the given image.
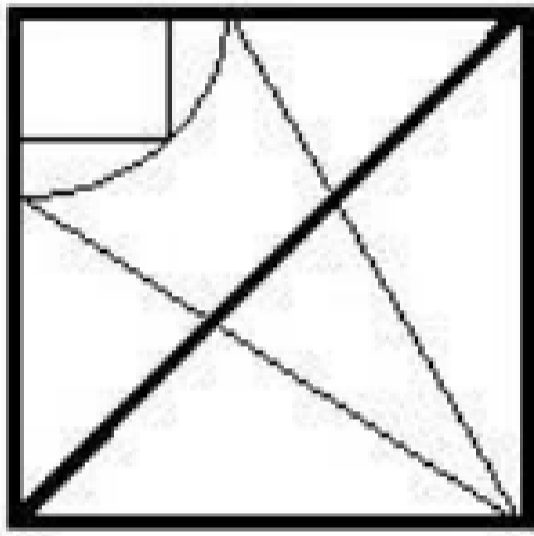

?

A

B

C

D
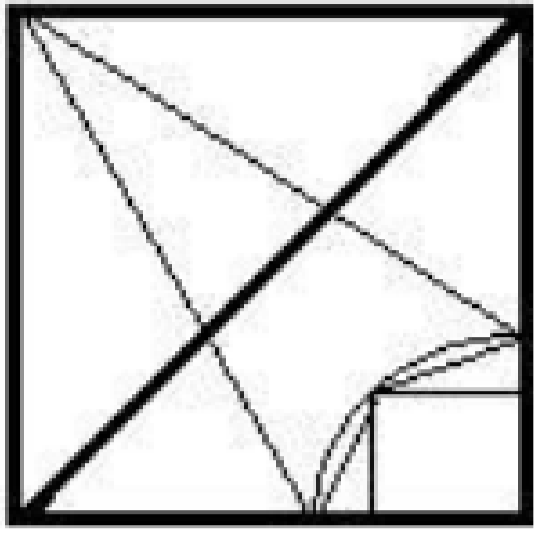
Solution

As per the given pattern, the option D is correct.

66. **'L' is the son of 'K' whose only daughter is G. 'L' is the son of 'B', whose wife is A How is A related to G?**

A Bahu

B Daughter

C Niece

D Mother-in-law

Solution

A is mother-in-law of G.

67. **Four of the following five are somehow similar and therefore create a group. Which of these is not related to this group?**

L, F, X, R, B

A X

B L

C F

D **B**

Solution

B is not related to this group.

68. **According to the logic used in the first pair, replace the question mark with the appropriate option**

   MJ: HE :: GW: ??

   A   FS

   B   CR

   C   ES

   D   **BR**

   Solution

   There are four letters in between M and H and J and E. So as per that pattern, GW : BR

A quote is given in this question, after which a statement has been given. Read the quotation carefully and determine the statement based on the quotation given.

69. A Chinese researcher, Hei-Jianqui, from Southern University of Southern Science and Technology in Shenzhen, spread his sensation in an international world that he has made changes in the human fetal genes, and as a result, early twins in the beginning of this month Was born If this proved to be true, then this genes would be the first example of human offspring, with the specific desirable characteristics arising from the use of newly developed tools of "editing". According to the claim, in the case of newly born Chinese infants, genes have been edited in such a way that it is not affected by the HIV virus, which causes AIDS. The stir caused by the announcement is not only due to scientific leap, but the excitement is about serious ethical questions. Gene "Editing" capabilities are now present with hundreds of researchers and labs around the world. But in the case of China, the leading scientists of this area, including co-inventor Jennifer Daudna, of CrispR technology used to "edit" the genes have long "global breakdown" on 'diagnostic applications of technology in humans' As long as the internationally accepted protocols are not developed,

Statement: CRISAR is a technique that can be used for editing gene.

Choose one of the following options
A - statement is definitely true.
B - The statement is probably true.
C - Statement can not be determined.
D - The statement is definitely false.

(A)   C

B   D

C   A

D   B

Solution

As per the given information, the statement is definitely true.

70. **Identify the image of the image given with the following options:**

SKETCH

A ƨKETCH

B HɔTƎꓘƧ

C ƨKEƚCH

D ƨKEƚɔH

Solution

As per the given image, the mirror image will be option C.

71. Pointing to a boy, one man said, "He is the only son of the husband of the mother of my son's sister." How is the man related to the boy?
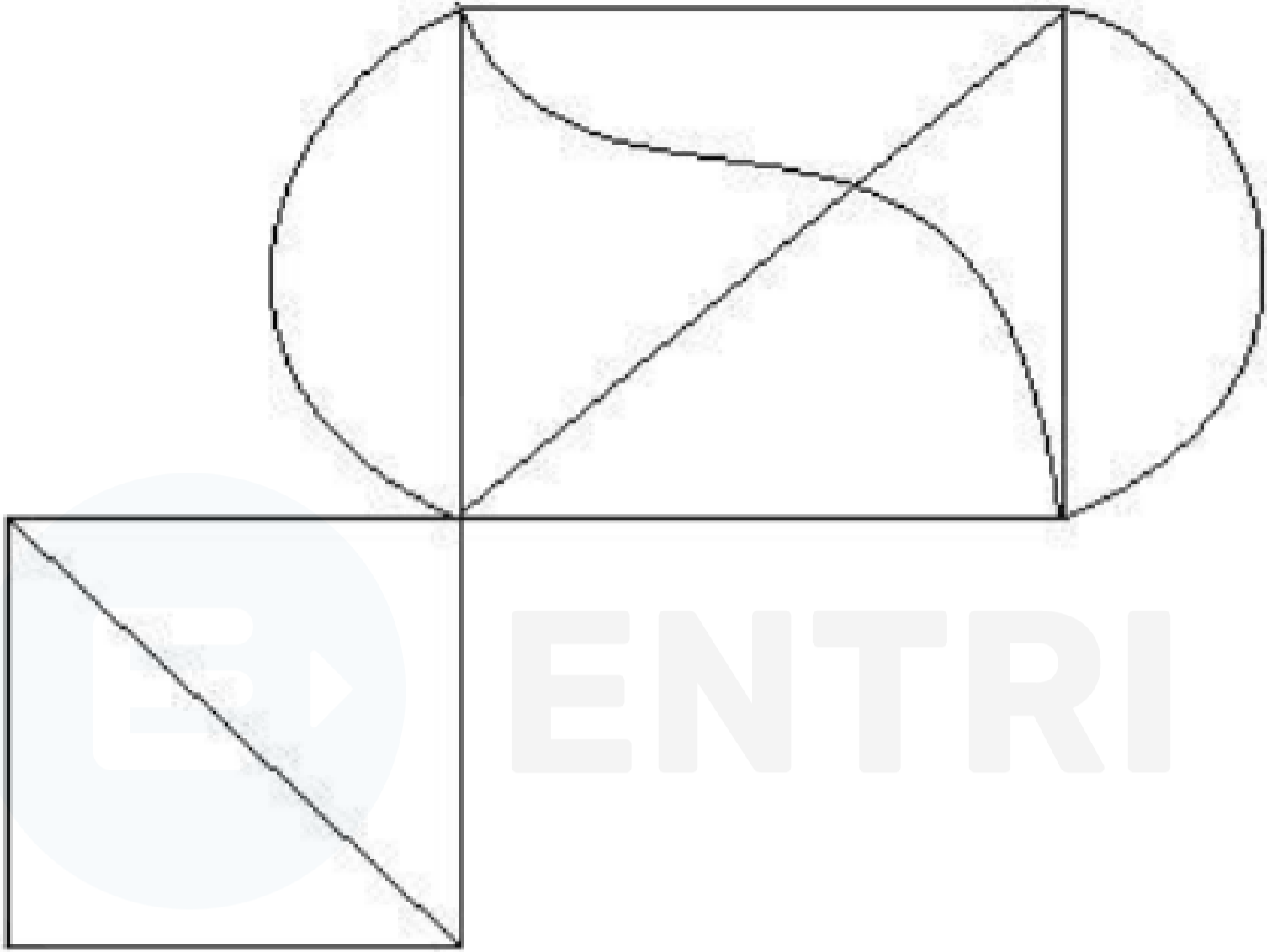
A Father

B Dada

C Cage

D Uncle

Solution

The man's son's sister is man's daughter and her mother is man's wife. The boy is the only son of the husband of his wife. So the man is the father of the boy.

72. **How many right angled triangles can be made from the given image?**

A   6

B   **4**

C   3

D   2

Solution

Four right angled triangles can be made from the given image.

73. **According to the logic used in the first pair, replace the question mark with the appropriate option.**

Author: Pen :: Barber: ??

A Trowel

B Spade

C Tack

D Scissor

Solution

Pen is the tool of the Author, so the tool of Barber is Scissor.

74. In any code language, if AMBLE has been coded as ZNYOV, what will be the code of PATROL in that language?

A KGZLIO

B **KZGILO**

C QZUSLM

D QUZLSM

Solution

Letters are coded by their reverse letter.

A	M	B	L	E
Z	N	Y	O	V

Similarly,

P	A	T	R	O	L
K	Z	G	I	L	O

Hence, 'KZGILO' is the correct answer.

A quote is given in this question, after which a statement has been given. Read the quotation carefully and determine the statement based on the quotation given.

75. **A Chinese researcher, Hei-Jianqui, from Southern University of Southern Science and Technology in Shenzhen, spread his sensation in an international world that he has made changes in the human fetal genes, and as a result, early twins in the beginning of this month Was born If this proved to be true, then this genes would be the first example of human offspring, with the specific desirable characteristics arising from the use of newly developed tools of "editing". According to the claim, in the case of newly born Chinese infants, genes have been edited in such a way that it is not affected by the HIV virus, which causes AIDS. The stir caused by the announcement is not only due to scientific leap, but the excitement is about serious ethical questions. Gene "Editing" capabilities are now present with hundreds of researchers and labs around the world. But in the case of China, the leading scientists of this area, including co-inventor Jennifer Daudna, of CrispR technology used to "edit" the genes have long "global breakdown" on 'diagnostic applications of technology in humans' As long as the internationally accepted protocols are not developed, Statement: Researcher Jiankui's claim that he has changed the human fetal genes has proved to be true.**

    Choose one of the following options

    A- statement is definitely true.

    B - The statement is probably true.

    C - Statement can not be determined.

    D - The statement is definitely false.

(**A**)   C

B   D

C   A

D   B

Solution

From the given information, the statement is definitely false.

76. **Carefully read the given information and answer the questions as per the following.**

   6 students Anil, Sita, Mansi, Kajal, Govind and Varu sit around looking around the center of a circular table (not necessarily in the same order). All six students prefer different subjects such as mathematics, physics, history, geography, chemistry and biology.

   i) The mathematics that likes it sits between the mascara and the mansi.
   ii) The person who likes Chemistry is at the third position on the right side of Kajal.
   iii) Varu, who is not a neighbor of Govind, likes biology.
   iv) Kajal sits immediately on the left side of Varu.
   v) Govind does not like mathematics.
   vi) Sita is at the third position on the right side of the person who likes history.
   vii) Who likes physics and who like biology are neighbors
   Who sits right between Varu and Sita?

   A   Mansi
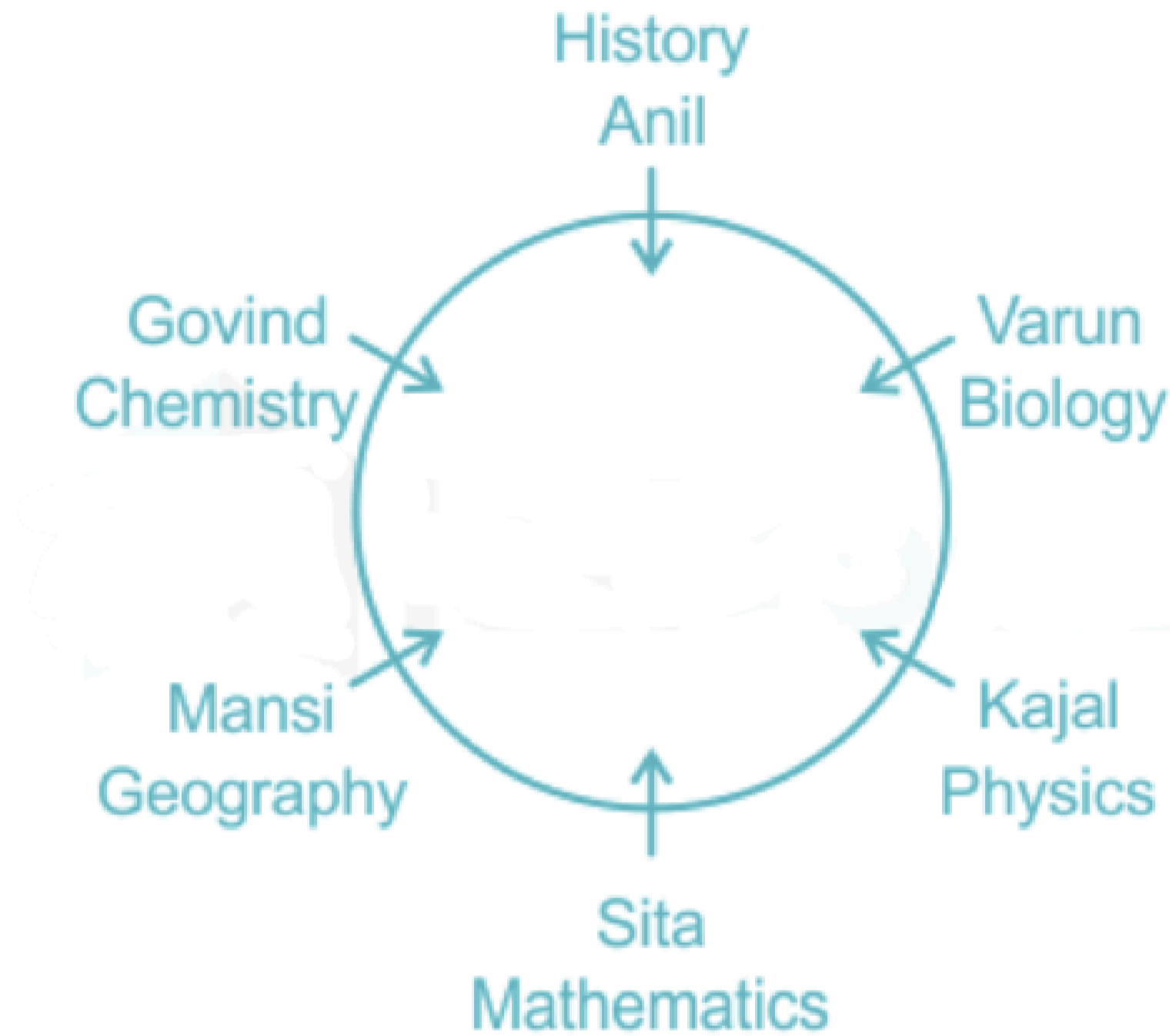
   B   Those who like physics

   C   Govind

   D   Those who like history

Solution

As per the given information, the final arrangement will be,

The final arrangement:

So Kajal who likes Phsics sits between Varu and Sita.

77. **Find the upcoming numbers in this series.**

12, 43, 162, 633,?

A   1899

B   1879

C   **2512**

D   2532

Solution

The pattern of the number series is,

$12 \times 4 - 5 = 43$
$43 \times 4 - 10 = 162$
$162 \times 4 - 15 = 633$
$633 \times 4 - 20 = 2512$

78. **Find the upcoming numbers in this series.**

    3, 13, 35, 109, 323,?

(A) 973

(B) 969

(C) 946

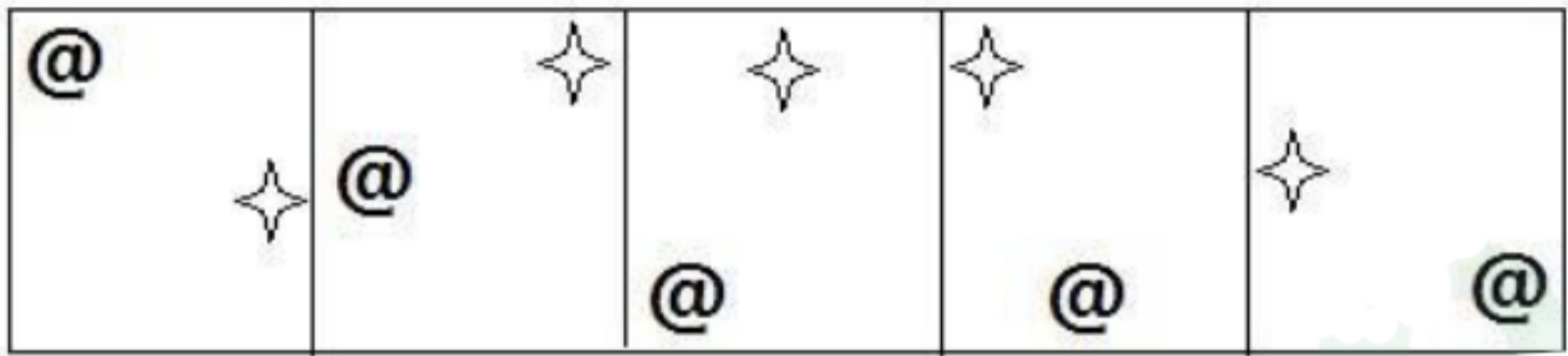(D) 646

Solution

The pattern of the series is,

$3 \times 3 + 4 = 13$
$13 \times 3 - 4 = 35$
$35 \times 3 + 4 = 109$
$109 \times 3 - 4 = 323$
$323 \times 3 + 4 = 973$

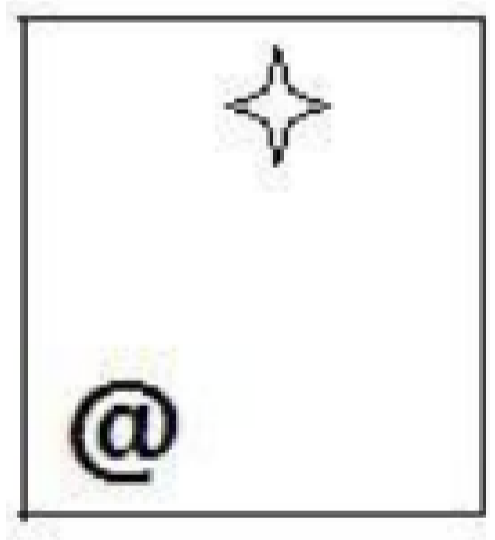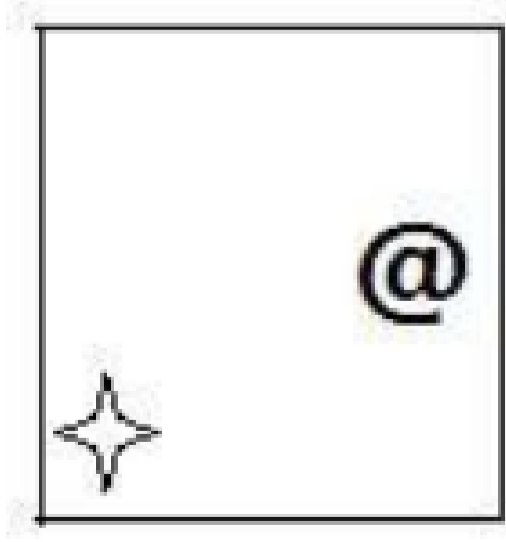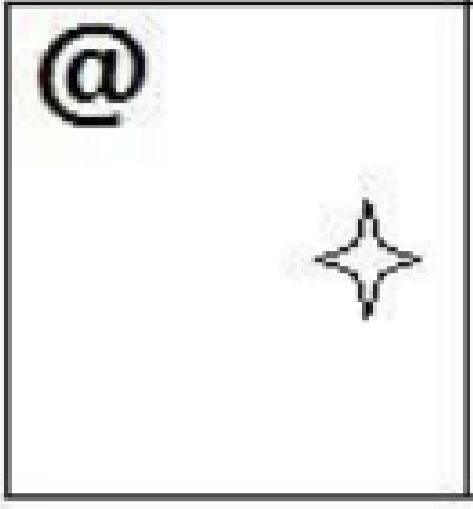**79.** Which of the options given for the given series will be the next picture?

A
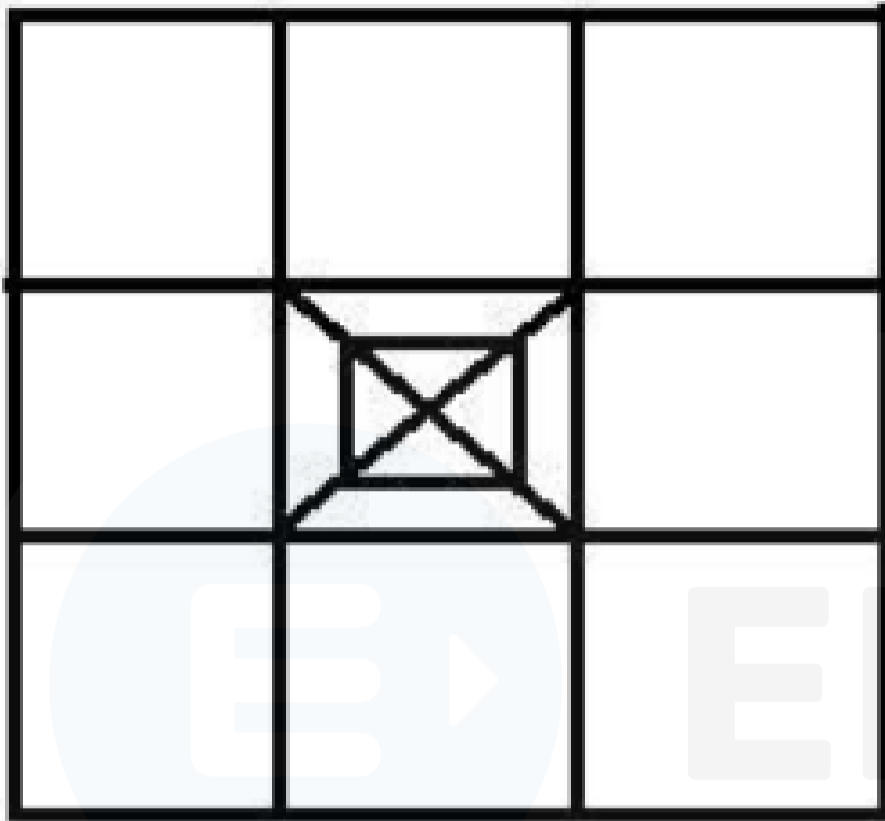

B

C

D

Solution

As per the given pattern, the image in option C is correct.

80. **How many classes are there in the given image?**

A   16

B   18

C   **15**

D   12

Solution

There are 15 classes are there in the given image.

81. **Find the upcoming numbers in this series.**

169, 146, 157, 134, 145,?

A   156

B   168

C   136

D   **122**

Solution

There are two series within the given series,

$$169 - 12 = 157$$
$$157 - 12 = 145$$

$$146 - 12 = 134$$
$$134 - 12 = 122$$

82. If a mirror is placed on the shaded line, which of the following options is the correct image of the given shape?

LIBYA

A. AYBIJ

B. ΓIBYA

C. AYBIΓ

D. ΛYBIJ

Solution

The image in option A is the mirror image.

83. In this question, there are two statements showing relations, after which I, II and III have been given three conclusions. Assuming that the given statements are true, find out which conclusions are true / true.

Statement: J = I> N ≥ G; G> L = E <M; T <U < J

Conclusion:

i) T < I

ii) I > E

iii) J> L

A Only i) and iii)

B **All Follow**

C Only i) and ii)

D Only iii)

Solution

From the given statement,

T < U < J=I, so T< I

I > G > L = E, so I > E

J > G > L = E, so J > L

84. In this question, after a statement i and ii two conclusions have been given. Assuming the given given in the statement together as truth, consider both the findings together and decide on which one of them follows beyond the logical and appropriate skepticism based on the information given in the statement.

Statement: weight is proportional to height

Conclusion:
i) If weight grows, height decreases.
ii) If height increases, then weight decreases.

Choose the appropriate one of the following options
(A) only follows the conclusions i
(B) Only conclusions follow ii
(C) either i or ii follows
(D) neither i nor ii follows
(E) both i and ii follow

A A

B B

C D

D C

Solution

From the given statement, either i or ii follows.

85. **Carefully read the given information and answer the questions as per the following.**

6 students Anil, Sita, Mansi, Kajal, Govind and Varu sit around looking around the center of a circular table (not necessarily in the same order). All six students prefer different subjects such as mathematics, physics, history, geography, chemistry and biology.

i) The mathematics that likes it sits between the mascara and the mansi.
ii) The person who likes Chemistry is at the third position on the right side of Kajal.
iii) Varu, who is not a neighbor of Govind, likes biology.
iv) Kajal sits immediately on the left side of Varu.
v) Govind does not like mathematics.
vi) Sita is at the third position on the right side of the person who likes history.
vii) Who likes physics and who like biology are neighbors
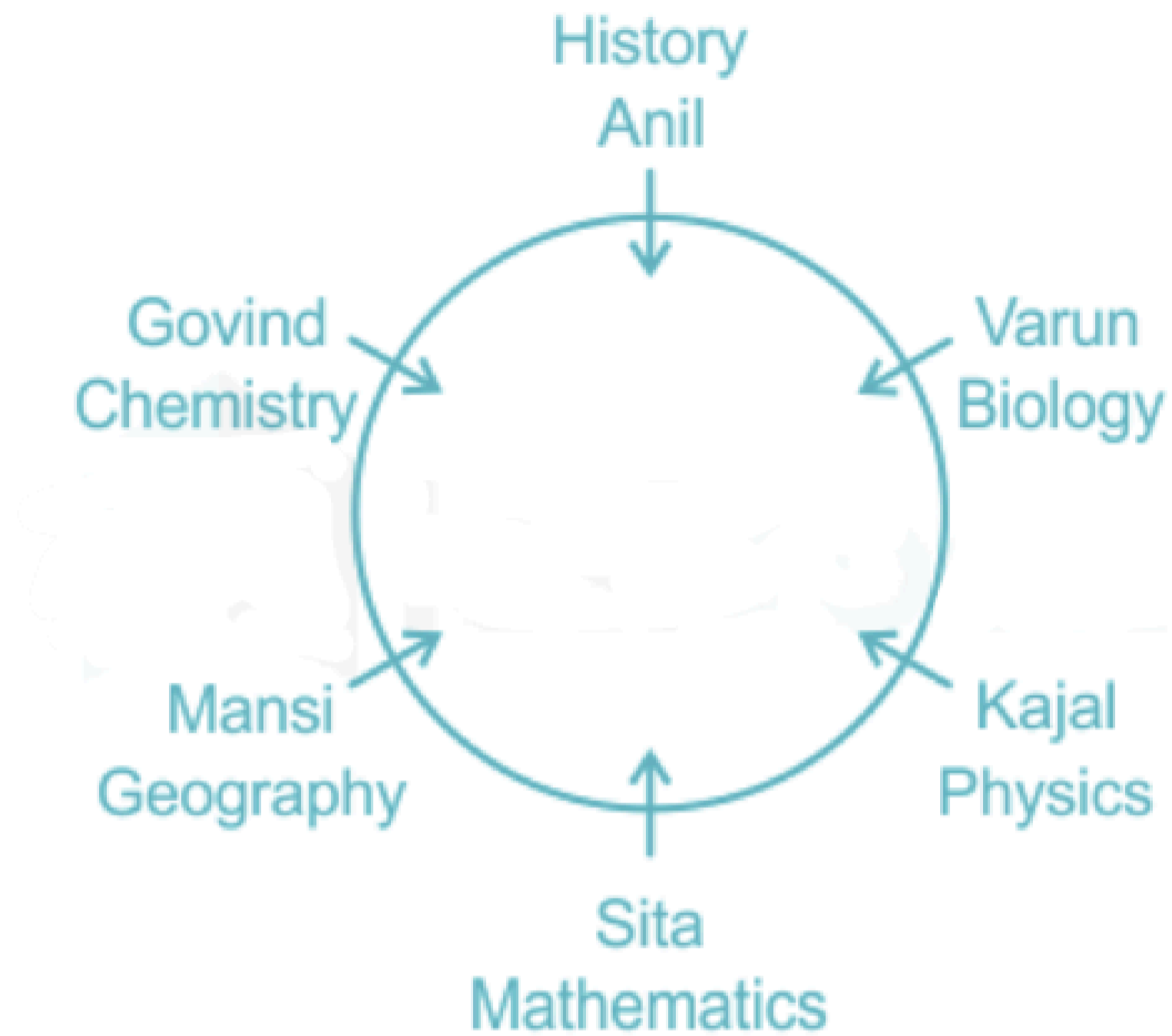**Who likes history?**

A Anil

B Sita

C Mansi

D Govind

Solution

From the given information, the final arrangement is,

The final arrangement:

So Anil likes history.

86. **Jeffrey donates 13% of his salary to disabled organizations, 12% orphanages, 14% of physically handicapped organizations and 16% of medical aid organizations. The remaining amount deposits the amount of 23445 for the monthly expenditure in the bank. Tell the amount donated in the orphanage**

A   6652

B   **6252**

C   6452

D   6852

Solution

Total percentage of the salary donated = 13+12+14+16 = 55%

Therefore, remaining amount = 45%.

Therefore, the salary will be, $\frac{23445}{0.45} = Rs.\,52100$

So the amount donated in orphanage is, $52100 \times 0.12 = Rs.\,6252$

87. **If the radius of a circle becomes ten times, how much of its periphery will be its circumference?**

A   9

B   8

C   11

D   **10**

Solution

If radius is 'r', then perimeter or circumference will be, 2πr

So if the radius of a circle is given up to 10 times, then perimeter will be also 10 times.

88. **Tellyn moves at a speed of normal speed ($\frac{10}{11}$) and takes 13 minutes more than normal time. Find the usual time taken.**

A 130 mins

B 120 mins

C 140 mins

D 150 mins

Solution

Let the distance be x and normal speed by s. So time taken when walks at normal speed will be, $t = \frac{x}{s}$

When walks at $\frac{10}{11}s$ she takes 6 minutes more.

$\frac{x}{s} + 13 = \frac{x}{\frac{10}{11}s}$

$\frac{11x}{10s} - \frac{x}{s} = 13$

$\frac{x}{10} = 13$

$x = 130$

89. In a box, there are three different types of old coins in ratio 6: 7: 8; the value of the old coin is Rs. 1, Rs. 5 and Rs. 10 respectively. If the total value of the coin is 847 rupees in the box, then find the number of coins worth 10 rupees.

A   84

B   65

C   56

D   48

Solution

Ratio of coins of Rs. 1, 5 and 10 rupees = 6 : 7 : 8

⇒ Ratio of values of Rs. 1, 5 and 10 rupees = 6 × 1 : 7 × 5 : 8 × 10 = 6 : 35 : 80

⇒ 6 + 35 + 80 = 121 units

⇒ 121 units = 847

⇒ 1 unit = $\dfrac{847}{121}$ = 7

Total value of coins of Rs. 10 = 7 × 80 = Rs. 560

Total number of coins of Rs. 10 = $\dfrac{560}{10}$ = 56

∴ The total number of coins of Rs. 10 is '49'.

90. **A train takes 73 seconds to cross the bridge of 448 meters. If this train takes 41 seconds to cross the sign board then find out the length of the train.**

A 484 m

B **574 m**

C 563 m

D 624m

Solution

Time taken to cross the bridge $= 73s$

Length of the bridge $= 448m$

Speed $= \frac{Distance}{time}$

Distance $=$ length of the train $+$ length of the bridge

Let the length of the train be x.

$\Rightarrow \frac{(x+448)}{73} = \frac{x}{41}$

$\Rightarrow 41x + 18368 = 73x$

$\Rightarrow 32x = 18368$

$$\Rightarrow x = \frac{18368}{32}$$

$$\Rightarrow x = 574m$$

$\therefore$ Length of the train is $574\ m$.

91. There is 10 rings in a gift box. The average weight of the first 4 rings is 39 grams and the remaining 6 rings have an average weight of 40 grams. Get the average weight of the total rings.

A   39.4

B   39.2

C   **39.6**

D   39.8

Solution

The required average is, $\frac{4\times 39 + 6\times 40}{10} = \frac{396}{10} = 39.6$

92. **The time taken by Rakesh and Wiki to cover the distance of 1000 km is in the ratio of 35: 27. Find the ratio of their motions.**

A 35:27

B 39:27

C **27:35**

D 27:39

Solution

The ratio of the speed will be inverse of the ratio of time taken since the distance is the same.

So required ratio is 27:35

93. **Solve:**

$$486 \div \left(\frac{3}{4} \times \frac{16}{15} - \frac{2}{3} \right) = ?$$

A 3654

B **3645**

C 3456

D 3465

Solution

$$486 \div \left(\frac{3}{4} \times \frac{16}{15} - \frac{2}{3} \right) = ?$$

$$486 \div \left(\frac{4}{5} - \frac{2}{3} \right) = ?$$
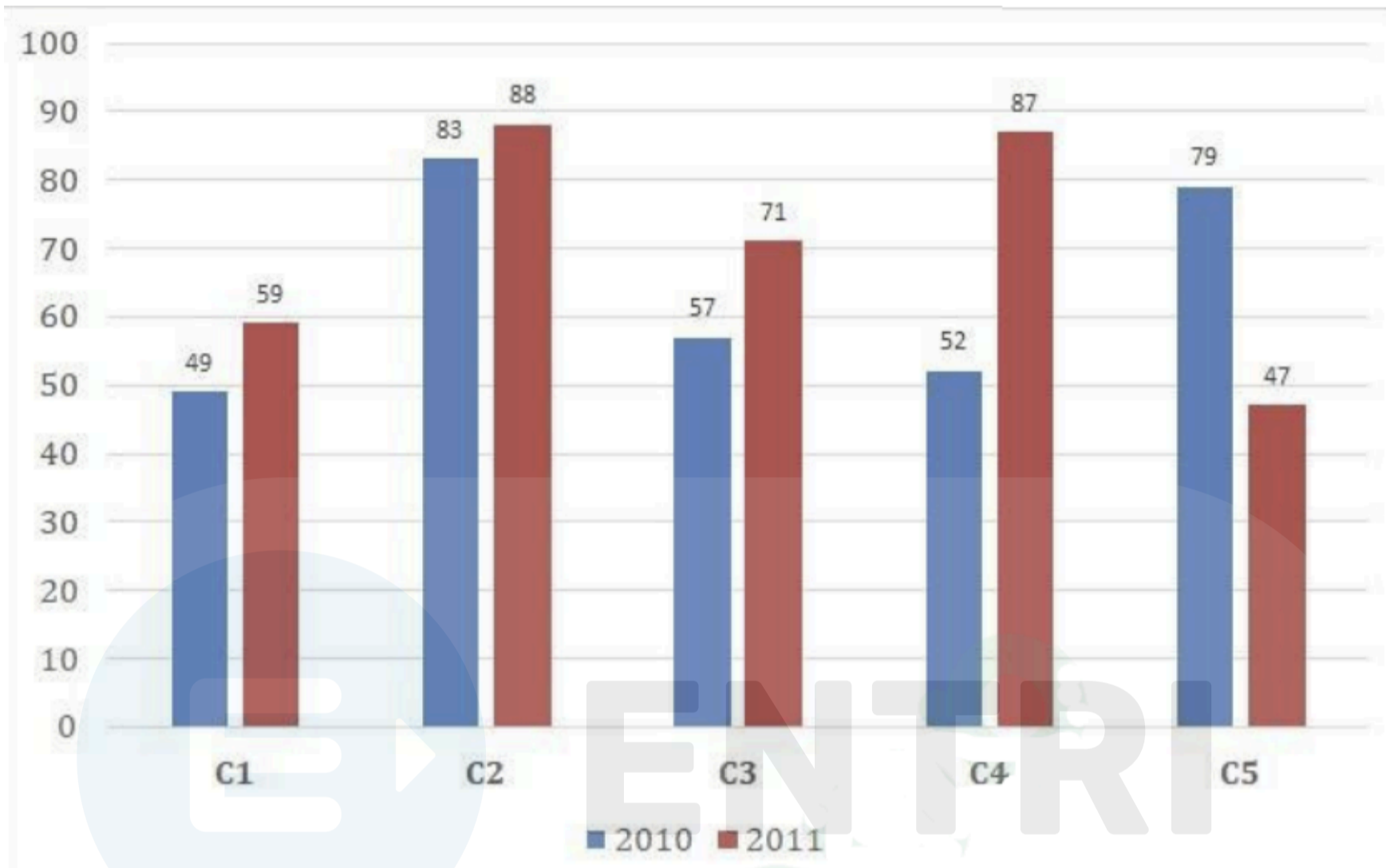
$$486 \div \frac{2}{15} = ?$$

$$? = \frac{486 \times 15}{2} = 3645$$

94.

Instructions: Study the graph of the following times and answer the following question:

Books (from thousands of C1, C2, C3, C4 and C5) of a publishing company in two consecutive years of 2010 and 2011) Sales.

A. **What is the average sale of all branches (in thousands) in 2010?**

A) 66

B) 65

C) **64**

D	63

Solution

Total sales in $20210 = 49 + 83 + 57 + 52 + 79 = 320$

Therefore, the required average is, $\frac{320}{5} = 64$

B. **How much is the total sales in C1, C3 and C5 branches during the two years? (In thousands)**

A	364

B	361

C	363

D	**362**

Solution

Total sales in C1, C3 and C5 branches during the two years =
$108 + 128 + 126 = 362$

95. A person reaches the college with a speed of 45 km / hr from the hostel till 5 minutes late. If he runs a bike at 60 kmph and he reaches 4 minutes early. Find the distance between the hostel and the college.

A   23 km

B   27km

C   25 km

D   35 km

Solution

Let the distance between hostel and college be x km. Let the time be t minutes.

Therefore,

$\frac{x}{\frac{45}{60}} = t + 5 \ldots (1)$

$\frac{x}{\frac{60}{60}} = t - 4 \ldots (2)$

(1) - (2),

$\frac{x}{3} = 9$

$x = 27$

96. The profit earned on the item sold at the rate of 2720 rupees, is 11% more profit than the loss on the same item sold at the rate of Rs. 1,243. Find the purchase price of the item.

A   Rs.11934

B   Rs.1943

C   Rs 1843

D   Rs 1834

Solution

Let the price of the item is Rs. x

When sold at Rs. 1243 the loss will be, x-1243.

When the item sold at Rs. 2720, the profit will be,

$$2720 - x = 1.11 \times (x - 1243)$$

Solving the equation, $x = 1947$

97. A shopkeeper sells a product at a price of Rs 1,368 and earns 12.5% profit. What will be the amount equal to half of the purchase price of the product.

A **Rs.608**

B Rs.604

C Rs.610

D Rs.606

Solution

According to the question,

Selling price of the article = Rs. 1368

SP = CP + Profit

$\Rightarrow$ Cost price of the article = Rs. 1368 × $\frac{100}{112.5}$ = Rs. 1216

Half of the cost price = 1216 $\div$ 2 = Rs. 608

$\therefore$ Half of the purchase price of product is Rs. 608

98. **How can the 24 students in the classroom be distributed equally to 720 mobiles?**

A 16

B 30

C 20

D 24

Solution

Number of mobiles for each student is, $\frac{720}{24} = 30$

99. The average weight of 103 notebooks in a box is 10.3 kg. When a new notebook is added to the box, the average weight goes up to 10.4 kg. Tell the weight of the new notebook.

A **20.7 kg**

B 20.3 kg

C 20.5 kg

D 20.9 kg

Solution

The average weight of the 103 notebooks is $= 10.3 \ kg$

$\Rightarrow$ Sum of weight of the 103 notebooks $= 103 \times 10.3 = 1060.9 \ kg$

The average weight of the 104 notebooks is $= 10.4 \ kg$

$\Rightarrow$ Sum of weight of the 104 notebooks is $= 104 \times 10.4 = 1081.6 \ kg$

$\therefore$ Weight of the 102nd book $= 1081.6 - 1060.9 = 20.7 \ kg$

100. The station master decides to increase the length and decreases breadth of a rectangular digital board by 7% and 7% respectively. Show changes in total area

A   **0.49% less**

B   Increases 0.36%

C   Increases 0.49%

D   0.36% decreases

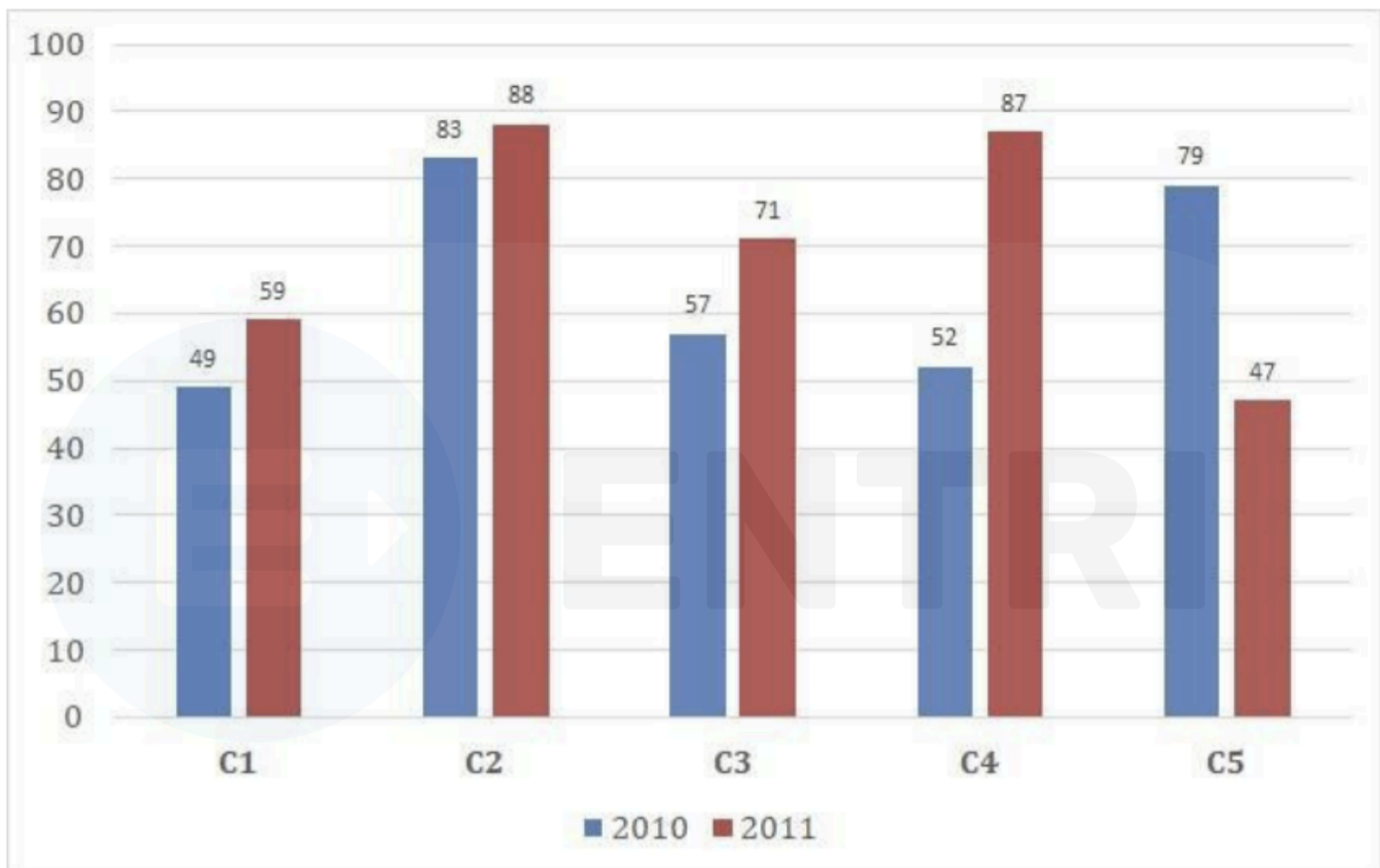## Solution

Area of rectangle initially, $A_1 = l \times b$

After increase in length and decrease in breadth, the area will be,
$A_2 = 1.07l \times 0.93b = 0.9951lb$

Therefore, change in area $= 1 - 0.9951 = 0.49\%$

Instructions: Study the graph of the following times and answer the following question:

101. **Books (from thousands of C1, C2, C3, C4 and C5) of a publishing company in two consecutive years of 2010 and 2011) Sales.**

What is the ratio of the total sales of branch C2 during the two years and the total sales of branch C4 during the two years?

A **171: 139**

B 183: 169

C 139: 171

Solution

Total sales of branch C2 $= 83 + 88 = 171$

Total sales of branch C2 $= 52 + 87 = 139$

Required ratio is, 171 : 139

102. Solve:

$$\frac{1}{13} \div \frac{1}{13} \div \frac{1}{13} \div \frac{1}{13} \div \frac{1}{13} = ?$$

A   **2197**

B   1444

C   1331

D   2917

Solution

$$\frac{1}{13} \times 13 \times 13 \times 13 \times 13 = 2197$$

103. The amount of 5600 rupees was invested on simple interest at the rate of 8% per annum. If after 5 years the amount is withdrawn and half the amount of the total amount is invested in the market. Find out the balance. (In rupees)

A   3820

B   **3920**

C   3720

D   3620

Solution

Total amount after 5 years $= 5600 + 5600 \times \frac{5 \times 8}{100} = Rs.\,7840$

Therefore, the amount invested in the market $= \frac{7840}{2} = Rs.\,3920$

104. **A person travels at the equivalent triangle area along with the plains of the triangular area, at 18 kmph, 24 kmph, and 36 kmph. Tell the average speed of travel.**

A   22kmph

B   **24kmph**

C   18kmph

D   34kmph

Solution

Let the side of the triangle be 72 km.

Average speed $= \frac{Total\ distance}{Total\ time}$

Time taken to cover first side $= \frac{72}{18} = 4\ hours$

Time taken to cover second side $= \frac{72}{24} = 3\ hours$

Time taken to cover third side $= \frac{72}{36} = 2\ hours$

Therefore, the average speed $= \frac{216}{9} = 24\ kmph$

105. **The total area of pieces of square glass 784 cm^2 , which is placed on top of a table. The breadth between the sides of the table and the piece of glass is 9 cm wide. Get the length of the table.**

A   40 cm

B   49 cm

C   **46 cm**

D   43 cm

Solution

Total area of the piece of glass is $784 \ cm^2$

Therefore, side of the square will be, $\sqrt{784} = 28 \ cm$

Therefore, the length of the table is, $28 + 9 + 9 = 46 \ cm$

106. **The shopkeeper added 37% of the purchase price as a markup and then he gives a discount of 37% on the face value on the sale, what would be the total profit or loss percentage.**

A   **13.69% Loss**

B   12.96% Loss

C   13.69% profit

D   12.96% profit

Solution

Let the cost price is Rs. x

Marked price will be, Rs. 1.37x

After discount, the selling price will be, $1.37x \times 0.63 = 0.8631x$

Therefore, the loss will be, $(x - 0.8631x) \times 100 = 13.69\%$

107. **The difference between earned interest from both, for investing under compound interest and general interest for 2 years, is 46 rupees. If interest rates are 4% per annum then tell the amount invested (in rupees)**

A   27750

B   **28750**

C   26750

D   30750

Solution

Let the principal amount be Rs. P

Therefore, simple interest after 2 years will be, $S.I = P \times \frac{2 \times 4}{100} = 0.08P$

Compound interest after 2 years will be,
$C.I = P \times (1 + \frac{4}{100})^n - P = 0.0816P$

The difference is Rs 46.

$0.0816P - 0.08P = 0.0016P = 46$

$P = \frac{46}{0.0016} = Rs. 28750$

108. **Under compound interest, an amount doubles in 3 years. How many years will it be 256 times its amount?**

A   **24 years**

B   28 years

C   22 years

D   26 years

Solution

Let the principal be Rs. x

$\Rightarrow$ Amount = 2x

As we know,

$A = P (1 + r/100)^t$

$\Rightarrow 2x = x (1 + r/100)^3$

$\Rightarrow (1 + r/100) = \sqrt[3]{2}$ ----(i)

Again,

A = 256x, P = x, Time = t years (suppose)

$\Rightarrow 256x = x (1 + r/100)^t$

$\Rightarrow (1 + r/100) = \sqrt[t]{256}$ ----(ii)

From equation (i) and (ii), we get

$\sqrt[3]{2} = \sqrt[t]{256}$

$\Rightarrow 2^{1/3} = 2^{8/t}$

Compare on powers

1/3 = 8/t

$\therefore$ t = 24 years

109. **When a number is divided by 84 then the remaining 10 comes. What will be the remaining if you divide that number by 12?**

A   11

B   8

C   6

D   **10**

Solution

Suppose, the number = 84 + 10 = 94

On dividing the number by 12,

$94 = 12 \times 7 + 10$

∴ Remainder when the number is divided by 12 = 10.

110. A cube of 13√3 cm diagonals is melted to a cuboid. If the length of the cuboid is similar to the back of the cube and the width is 6.5 cm, then what will be the height of the cuboid?

A 32 cm

B 28 cm

C 24 cm

D **26 cm**

Solution

Volume of cube $= a^3$

Volume of cuboid = lbh

Diagonal of the cube = √3a

⇒ √3a = 13√3

⇒ a = 13 cm

Length of the cuboid, l = 13 cm

Let height of the cuboid be h cm

Width of the cuboid, b = 6.5 cm

According to the question

$13 \times 6.5 \times h = 13 \times 13 \times 13$

$\Rightarrow h = \dfrac{(13 \times 13 \times 13)}{(13 \times 6.5)}$

$\therefore h = 26$ cm

111. **Solve:**

$(8^4)^2 \times \dfrac{1}{512^2} \times 8 + 18 =?$

A   490

B   **530**

C   510

D   550

Solution

$(8^4)^2 \times \dfrac{1}{512^2} \times 8 + 18 =?$

$(8^4)^2 \times \dfrac{1}{(8^3)^2} \times 8 + 18 =?$

$? = 8^3 + 18 = 530$

112. Vino received 76 points out of 80 in French, 98 out of 100 in English, 56 out of 70 in Spanish, and 43 out of 50 in Japanese. What was the total percentage it received?

A 89%

B **91%**

C 93%

D 87%

Solution

Total marks received $= 76 + 98 + 56 + 43 = 273$

Total percentage $= \frac{273}{300} \times 100 = 91\%$

113. Akil shared 550 gifts among 4 children. The first part of the child is twice the share of the second child and three times the third child's share and four times the fourth child. First tell the amount of gifts received by the first and second child.

A   324

B   **396**

C   384

D   372

Solution

Let first, second, third, fourth child got

a, b, c, and d gifts respectively

$a = 2b = 3c = 4d = 12x$ (suppose)

$a = 12x, b = 6x, c = 4x, d = 3x$

$12x + 6x + 4x + 3x = 550$

$x = 22$

Gifts received by first and second child

$= 12x + 6x = 18x = 396$

114. The ratio of salaries to Hamid, Kristo and Ganesh is 3: 5: 7, if Ganesh is getting more than 564 rupees from Hamid, then what is Christo's salary?

A 505

B 805

C **705**

D 605

Solution

Let the salaries of Hamid, Kristo and Ganesh is 3x, 5x and 7x.

Difference of salaries of Hamid and Ganesh = 4x

Therefore, 4x = 564.

Therefore, $x = 141$

Therefore, Kristo's salary $= 5x = Rs.\,705$

115. **214! Tell the number of the following zeros in**

A   **51**

B   47

C   45

D   53

Solution

There are 51 multiples of 10 between 0 and 214. So there will be 51 trailing zeros.

116. **In a support project of an English based company, there are 513 male and 513 female employees. The average productivity of all employees is 63 calls per day. The average call organized by the male employee is 63 calls per day. What is the average call to be paid per day by female employees?**

A **63**

B 61

C 67

D 65

Solution

An English-based company has 513 men and 513 female employees in a collaborative project. The average attendance of all employees is 63 calls per day. On average, an average 63 calls are received by a male employee every day. Since number of male and female is the same, average of the number of calls being added by the women staff daily will be 63 calls.

117. Solve:

$$\sqrt{21.16} + \sqrt{79.21} + 8.9 = ?$$

A   22.6

B   **22.4**

C   22.2

D   22.8

Solution

$$\sqrt{21.16} + \sqrt{79.21} + 8.9 = ?$$

$$4.6 + 8.9 + 8.9 = ?$$

$$? = 22.4$$

118. **Get the product of the two digits of which the smallest equator ratio (LCM) is 70 and the maximum consonant (HCF) is 7.**

A   480

B   **490**

C   510

D   390

Solution

Product of the two numbers $= 70 \times 7 = 490$

119. **A bulb producing company found that 11% of the total product is faulty. If the number of nondefective products is 6319, then specify the number of defective products.**

A **781**

B 681

C 593

D 793

Solution

Let the total number of producs be x.

Since 11% of the total producs is defective, then the 89% will be the nondefective products.

Therefore, $0.89x = 6319$

$x = \frac{6319}{0.89} = 7100$

Therefore, the number of defective products $= 7100 \times 0.11 = 781$

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id=me.entri.entrime)