

RRB NTPC 9 Jan 2021 Shift 1 Solution

1. Which is called as brain of any computer system?

- a. CPU
- b. UPS
- c. ALU
- d. Monitor

Ans. a

Explanation:

The correct answer is CPU.

CPU is referred to as the brain of any computer system.

2. Solve the following:

$$80 \div (16 \div 2) + \{[(6 \times 5) - 15 \times 2 + 4] - 12\}$$

- a. - 62
- b. 2
- c. - 17
- d. 148

Ans. b

Explanation:

Follow BODMAS rule

Given:

$$80 \div (16 \div 2) + \{[(6 \times 5) - 15 \times 2 + 4] - 12\}$$

Calculation:

$$80 \div (16 \div 2) + \{[(6 \times 5) - 15 \times 2 + 4] - 12\}$$

$$\Rightarrow 80 \div 8 + \{[30 - 30 + 4] - 12\}$$

$$\Rightarrow 10 + \{4 - 12\}$$

$$\Rightarrow 10 - 8$$

$$\Rightarrow 2$$

∴ The required result is 2.

3. How many schedules are there in the Wildlife Protection Act, 1972 of India?

- a. VII**
- b. VI**
- c. IV**
- d. V**

Ans. b

Explanation:

The correct answer is VI.

The Wildlife Protection Act of 1972 contains six schedules.

4. Which public sector enterprise has the status of Maharatna?

- a. Indian Oil Corporation Limited**
- b. Indian Railway Catering & Tourism Corporation Limited**
- c. Hindustan Aeronautics Limited**
- d. Airport Authority of India**

Ans. a

Explanation:

The correct answer is Indian Oil Corporation Limited.

5. Zamir buys an article with off-season discount of 40% and sells at 25% discount on the marked price. Find his percentage profit loss.

- a. 25% profit**
- b. 15% profit**
- c. 15% loss**
- d. 25% loss**

Ans. a

Explanation:

Given:

Discount percentage at which Zamir bought the article on the Marked Price = 40%

Discount percentage at which Zamir sold the article on the Marked Price = 25%

Formulas used:

Discount is calculated on the Marked Price.

Discount = Marked Price \times Discount/100

Selling Price = Marked Price \times (100 - Discount)%

Profit = Selling Price - Cost Price

Profit percentage = Profit/Cost Price \times 100

Calculation:

Let the Marked Price be = 100a

As per the question;

Price at which Zamir bought the article (Cost Price) = $100a \times (100 - 40)\%$

$\Rightarrow 100a \times 60/100 = 60a$

Price at which Zamir sold the article (Selling Price) = $100a \times (100 - 25)\%$

$\Rightarrow 100a \times 75/100 = 75a$

Profit = $75a - 60a = 15a$

\therefore Profit Percent = $15a/60a \times 100 = 25\%$

6. Select the option that is related to the third term in the same way as the second term is related to the first term.

Rat : Hole :: Horse : ?

- a. Den
- b. Burrow
- c. Cage
- d. Stable

Ans. d

Explanation:

The logic followed here is:

A rat lives in a hole.

Similarly,

A horse lives in a stable.

Hence, "stable" is the correct answer.

7. Select the option that is related to the third number in the same way as the second number is related to the first number.

23 : 529 :: 27 : ?

- a. 625
- b. 576
- c. 676
- d. 729

Ans. d

Explanation:

The logic followed here is:

The second number is the square of the first number.

$$23^2 = 529$$

Similarly,

$$27^2 = 729$$

Hence, "729" is the correct answer.

8. _____ is a communication protocol.

- a. HTTP**
- b. HTP**
- c. CP**
- d. TP**

Ans. a

Explanation:

The correct answer is HTTP.

Hypertext Transfer Protocol (HTTP) is the foundation of data communication for the worldwide web.

9. Which of the following Viceroy of India did take the initiative to create elected local government bodies?

- a. Lord Wavell**
- b. Lord Irwin**
- c. Lord Rippon**
- d. Lord Reading**

Ans. c

Explanation:

The correct answer is Lord Rippon.

Lord Ripon was the Viceroy of India who took initiative to create elected local government bodies called the local boards.

10. A wheel of a cycle makes 7000 revolutions in moving 11 km. What is the diameter of the wheel?

- a. 50 cm**
- b. 25 cm**

- c. 10 cm
- d. 100 cm

Ans. a

Explanation:

Given:

No of revolutions made by a wheel in moving 11 km = 7000

Formulas used:

The distance covered by a wheel in one revolution is its perimeter.

Diameter of circle = $2 \times$ radius

Perimeter of a circle = $2\pi r$

Calculation:

Distance covered in 7000 revolutions by a wheel of cycle = 11 km

\Rightarrow 7000 revolutions = 11×1000 m \times 100 cm

\Rightarrow 7000 revolutions = 1100000 cm

\Rightarrow 1 revolution = $1100000/7000$ cm

$\Rightarrow 2\pi r = 1100/7$ cm

$\Rightarrow 2 \times 22/7 \times r = 1100/7$

$\Rightarrow r = 1100/7 \times 7/44$

$\Rightarrow r = 100/4$

$\Rightarrow 2r = 100/4 \times 2$

$\Rightarrow 2r = 50$ cm

\therefore The diameter of the circle is 50 cm.

11. Which river stretch is known as National Waterways-2?

- a. Brahmaputra
- b. Mahanadi
- c. Ganga
- d. Godavari

Ans. a

Explanation:

The correct answer is Brahmaputra.

Brahmaputra River stretch is known as National Waterways-2.

Between Bangladesh's border and Sadiya, the river Brahmaputra runs for 891 kilometers.

12. The Sum of the digits of a two-digit number is 6. If the digit is reversed, the new number equals double of the original number decreased by 6. Find the number.

- a. 24**
- b. 15**
- c. 42**
- d. 51**

Ans. a

Explanation:

Given:

Sum of the digits of a two-digit number = 6

Calculation:

Let the unit digit of the number be = a

Ten's digit be = 6 - a

The original number = $10(6 - a) + a = 60 - 10a + a$

$\Rightarrow 60 - 9a$

New number after the digits are reversed = $10a + (6 - a) = 9a + 6$

As per the question;

$9a + 6 = 2 \times (60 - 9a) - 6$

$\Rightarrow 9a + 6 = 120 - 18a - 6$

$\Rightarrow 9a + 18a = 114 - 6$

$\Rightarrow 27a = 108$

$\Rightarrow a = 108/27$

$\Rightarrow a = 4$

\therefore The original number = $60 - 9a = 60 - 9 \times 4$

$\Rightarrow 60 - 36 = 24$

13. How many numbers between 300 and 1000 are divisible by 7?

- a. 101**
- b. 301**
- c. 994**
- d. 100**

Ans. d

Explanation:

Given condition:

Numbers between 300 and 1000 are divisible by 7.

Concept:

Arithmetic Progression

$$a_n = a + (n - 1)d$$

Calculation:

The first number that is divisible by 7 (300 - 1000) = 301

Likewise: 301, 308, 315, 322.....994

The above series makes an AP,

Where $a = 301$, Common Difference/ $d = 308 - 301 = 7$ and Last term (a_n) = 994

$$\Rightarrow a_n = a + (n - 1)d$$

$$\Rightarrow 994 = 301 + (n - 1)7$$

$$\Rightarrow (994 - 301)/7 = n - 1$$

$$\Rightarrow 693/7 + 1 = n$$

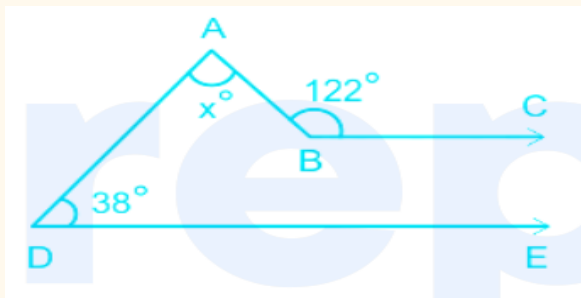
$$\Rightarrow 99 + 1 = n$$

$$\Rightarrow n = 100$$

\therefore There are 100 numbers between 300 and 1000 which are divisible by 7.

14. In the given figure, $BC \parallel DE$.

Find the value of x .



a. 20

b. 84

c. 142

d. 38

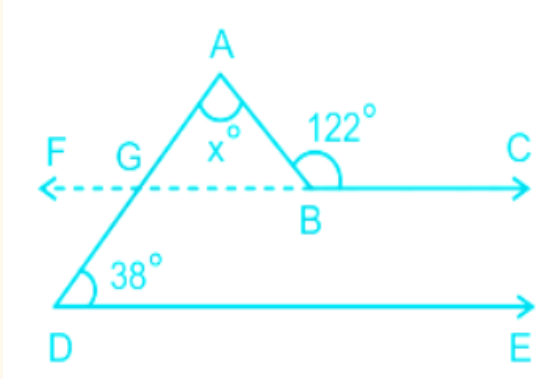
Ans. b

Explanation:

Given:

In the figure, $BC \parallel DE$.

Calculation:



Extending CB by constructing $FB \parallel DE$.

$$\angle ABC + \angle ABF = 180^\circ \because \text{[Linear Pair]}$$

$$\Rightarrow 122^\circ + \angle ABF = 180^\circ$$

$$\Rightarrow \angle ABF = 180^\circ - 122^\circ = 58^\circ \quad (1)$$

$$\angle AGB = \angle ADE = 38^\circ \because \text{[Corresponding Angles]}$$

In triangle AGB, $\angle AGB + \angle GAB + \angle ABG = 180^\circ$ [Angle Sum Property]

$$\Rightarrow 38^\circ + x + 58^\circ = 180^\circ$$

$$\Rightarrow x = 180^\circ - 38^\circ - 58^\circ$$

$$\Rightarrow x = 84^\circ$$

\therefore The value of x° is 84.

15. Four number-pairs have been given, out of which three are alike in some manner and one is different. Select the number-pair that is different from the rest.

- a. 12 : 15
- b. 17 : 19
- c. 11 : 13
- d. 21 : 23

Ans. a

Explanation:

The logic followed here is:

Second number - 2 = First number

1. $15 - 12 = 3$

2. $19 - 17 = 2$

3. $11 - 13 = 2$

4. $23 - 21 = 2$

In options 2, 3, and 4, the difference is 2 but in option 1 the difference is 3 which is

different from others.

Hence, "option 1" is the correct answer.

16. Dalip Rai borrowed Rs. 24000 from Amarjeet at simple interest of 9% per annum. Find the sum he will have to return after 3 years.

- a. Rs. 4,800
- b. Rs. 6,480
- c. Rs. 28,800
- d. Rs. 30,480

Ans. d

Explanation:

Given:

Money borrowed by Dalip from Amarjeet = Rs.24000

Rate of simple interest = 9% per annum for 3 years

Formulas used:

Simple Interest = Principal \times Rate/100 \times Time

Amount = Principal + Simple Interest

Calculation:

Amount = Rs.24000 + Rs.24000 \times 9/100 \times 3

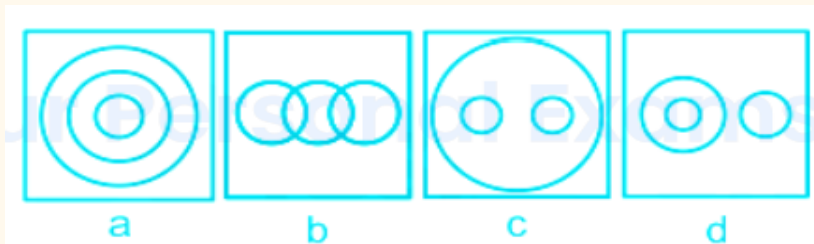
\Rightarrow Rs.24000 + Rs.6480

\Rightarrow Rs.30480

\therefore The amount to be returned after 3 years by Dalip is Rs.30480.

17. Select the Venn diagram that best represents the relationship between the given set of classes.

Bronze, Brass, Alloys



- a. c
- b. d
- c. a

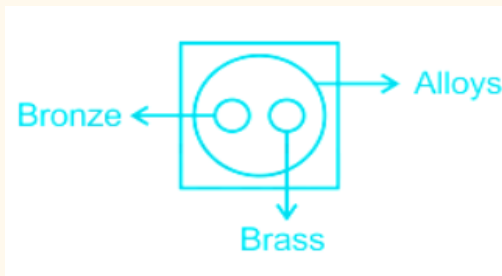
d. b

Ans. a

Explanation:

Bronze and Brass are Alloys but no Bronze is Brass.

The Venn diagram that best represents the relationship between the given set of classes:



Hence, "option 1" is the correct answer.

18. Sum of four consecutive multiples of 3 is 78. The largest of these number is:

a. 18

b. 27

c. 24

d. 21

Ans. c

Explanation:

Given:

Sum of four consecutive multiples of 3 = 78

Calculation:

Let the first multiple of 3 be = $3a$

Likewise, second multiple of 3 be = $3(a + 1)$

\Rightarrow Third multiple of 3 be = $3(a + 2)$

\Rightarrow Fourth multiple of 3 be = $3(a + 3)$

$3a + 3(a + 1) + 3(a + 2) + 3(a + 3) = 78$

$\Rightarrow 3a + 3a + 3 + 3a + 6 + 3a + 9 = 78$

$\Rightarrow 12a + 18 = 78$

$\Rightarrow 12a = 78 - 18 = 60$

$\Rightarrow a = 60/12 = 5$

∴ The largest multiple of 3 = $3(a + 3) = 3 \times (5 + 3) = 24$

19. The speed of a boat in still water is 14 km/h. It goes 28 km downstream in 1 h 45 min. Find the speed of the stream.

- a. 7 km/h
- b. 12 km/h
- c. 2 km/h
- d. 16 km/h

Ans. c

Explanation:

Given:

Speed of a boat in still water = 14 km/h

Distance covered = 28 km

Time taken while doing downstream = 1 hour 45 minutes

Formulas used:

Speed downstream = Speed of boat + Speed of stream

Time = Distance/Speed

Calculation:

Let the speed of stream be = b

$28 \text{ km}/(14 + b) = 1 + 45/60 \text{ hours}$

$\Rightarrow 28/(14 + b) = 1 + 3/4$

$\Rightarrow 28/(14 + b) = 7/4$

$\Rightarrow 4/(14 + b) = 1/4$

$\Rightarrow 14 + b = 4 \times 4$

$\Rightarrow 14 + b = 16$

$\Rightarrow b = 16 - 14 = 2 \text{ km/h}$

∴ The speed of stream is 2 km/h.

20. Demographic Transition is describe as _____.

- a. a stage in which the population growth of the country is zero
- b. a process where there is a decline in the birth-rate
- c. a process of change in a society's population over time
- d. a process where there is a decline in the death rate

Ans. c

Explanation:

The correct answer is a process of change in a society's population over time. Demographic Transition is a process of change in a society's population over time.

21. Where is the headquarters of OPEC located?

- a. Vienna
- b. Geneva
- c. Brussels
- d. Zurich

Ans. a

Explanation:

The correct answer is Vienna

It has been headquartered in Vienna, Austria, since 1965.

22. The top of two towers of heights x and y standing on level ground, subtend angles of 60° and 30° respectively at the midpoint of the line joining their feet. The value of $x : y$ is:

- a. 3 : 1
- b. 1 : 2
- c. 2 : 1
- d. 1 : 3

Ans. a

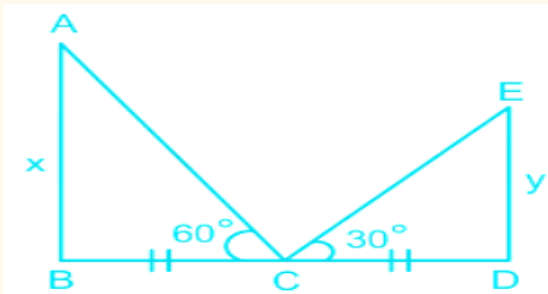
Explanation:

Given:

The lengths of two towers are x and y respectively.

Angles subtended by the tops of the towers at the midpoint of the line are 60° and 30° respectively.

Calculation:



$$BC = CD$$

In triangle ABC, $AB/BC = \tan 60^\circ$

$$\Rightarrow x/BC = \sqrt{3}$$

$$\Rightarrow BC = x/\sqrt{3} \quad (1)$$

In triangle CDE, $ED/CD = \tan 30^\circ$

$$\Rightarrow y/CD = 1/\sqrt{3}$$

$$\Rightarrow CD = \sqrt{3}y \quad (2)$$

$$(1) = (2)$$

$$\Rightarrow BC = CD$$

$$\Rightarrow x/\sqrt{3} = \sqrt{3}y$$

$$\Rightarrow x = 3y$$

$$\Rightarrow x/y = 3/1$$

\therefore The required ratio, $x : y = 3 : 1$

23. The difference between 82% and 73% of the same number is 72. What is 48% of that number?

a. 418

b. 360

c. $\frac{1440}{31}$

d. 384

Ans. d

Explanation:

Given:

The difference between 82% and 73% of the number = 72

Calculation:

Let the number be = y

$$y \times 82\% - y \times 73\% = 72$$

$$\Rightarrow y(82/100 - 73/100) = 72$$

$$\Rightarrow y = 72 \times 100/9 = 800$$

$$\therefore 48\% \text{ of } y = 800 \times 48/100 = 384$$

24. A box contains 6 white, 2 black and 3 red balls. If a ball is drawn randomly, what is the probability that it will not be white?

a. $\frac{5}{6}$

b. $\frac{5}{11}$

c. $\frac{6}{11}$

d. $\frac{6}{5}$

Ans. b

Explanation:

Given:

A box has 6 white, 2 black and 3 red balls.

Formula used:

Probability = No of favorable outcomes/Total no of possible outcomes

Calculation:

Total no of balls = $6 + 2 + 3 = 11$

∴ P(Not a white ball) = $5/11$

25. In which city/district of India was the first cash-and-carry store opened by CSC to promote rural marketing?

a. Haridwar

b. Bhopal

c. Surat

d. Moradabad

Ans. d

Explanation:

The correct answer is Moradabad.

India's first cash-and-carry store was opened in Moradabad.

26. A man and a woman can complete a task in 8 and 12 days respectively. In how many days will 2 men and 3 women be able to complete the task?

a. 5

b. 3

c. 4

d. 2

Ans. d

Explanation:

Given:

Time is taken by a man to do a task = 8 days

Time is taken by a woman to do a task = 12 days

Formula used:

Total work = (No of persons) × (No of days)

Calculation:

1 man × 8 days = 1 woman × 12 days

⇒ 8 Man = 12 Woman

⇒ 2 Man = 3 Woman

Total work in terms of women = 1 × 2 × 12 = 24 units

2 Man + 3 Woman = 3 women + 3 women = 6 women

∴ Time taken by 6 women to complete the task = $24/(6 \times 2)$

⇒ 2 days

27. Zaved borrowed Rs. 10,000 for 2 years on compound interest, compounded annually and paid Rs. 12,544 at the end of 2 years. If he had borrowed the amount on simple interest, then how much money he would have saved?

a. Rs. 12,400

b. Rs. 2,400

c. Rs. 144

d. Rs. 4,944

Ans. c

Explanation

Given:

Sum borrowed by Zaved for 2 years = Rs.10000

Amount paid by Zaved at the end of 2 years = Rs.12544

Formulas used:

When interest compounded annually;

Amount = Principal × $(1 + r/100)^n$

Amount at simple interest;

Amount = Principal + Principal × Rate/100 × Time

Calculation:

$$12544 = 10000 \times (1 + r/100)^2$$

$$\Rightarrow 12544/10000 = (1 + r/100)^2$$

$$\Rightarrow \sqrt{(784/625)} = 1 + r/100$$

$$\Rightarrow 28/25 - 1 = r/100$$

$$\Rightarrow 3/25 = r/100$$

$$\Rightarrow 25r = 300$$

$$\Rightarrow r = 300/25 = 12\%$$

Amount at the end of 2 years at 12% per annum simple interest;

$$\text{Amount} = 10000 + 10000 \times 12/100 \times 2$$

$$\Rightarrow 10000 + 2400$$

$$\Rightarrow 12400$$

∴ The Amount saved by Zaved = Rs.12544 - Rs.12400 = Rs.144

28. What is the rank of India in World Economic Forum's (WEF) global competitiveness index for 2019?

- a. 52nd
- b. 71st
- c. 68th
- d. 50th

Ans. c

Explanation:

The correct answer is 68th.

India slipped to the 68th position in the Global Competitiveness Index 2019.

29. Select the option that is related to the third term in the same way as the second term is related to the first term.

EFGH : VUTS :: JKLM : ?

- a. QNPO
- b. QPNO
- c. QPON
- d. QOPN

Ans. c

Explanation:

The logic followed here is:

5	Opposite letter	22
E	→	V
6	Opposite letter	21
F	→	U
7	Opposite letter	20
G	→	T
8	Opposite letter	19
H	→	S

Similarly,

10	Opposite letter	17
J	→	Q
11	Opposite letter	16
K	→	P
12	Opposite letter	15
L	→	O
13	Opposite letter	14
M	→	N

Hence, "QPON" is the correct answer

30. The Ayushman Bharat Scheme was started in _____ in the year 2018.

- a. Jharkhand
- b. Chandigarh
- c. Orissa
- d. Madhya Pradesh

Ans. a

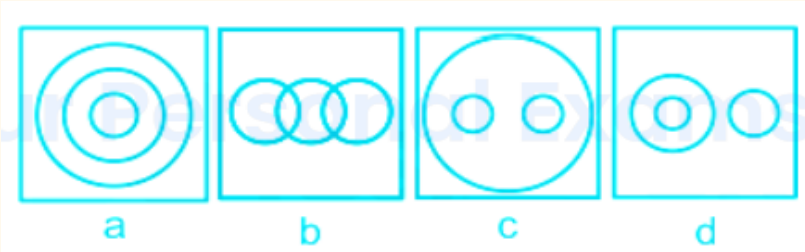
Explanation:

The correct answer is Jharkhand

The Ayushman Bharat Scheme was launched on 23rd September 2018 in Ranchi, Jharkhand

31. Select the Venn diagram that best represents the relationship between the given set of classes.

Mars, Venus, Planets



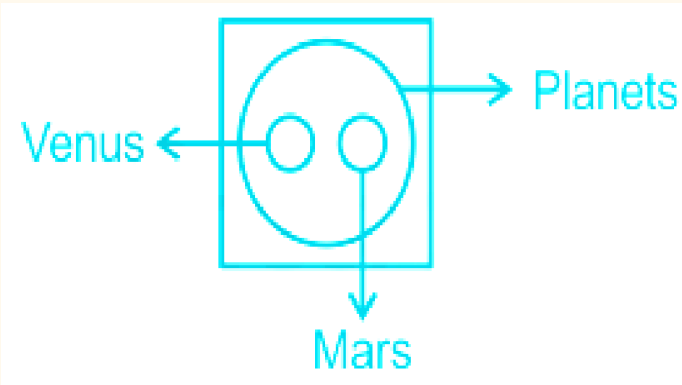
- a. d
- b. c
- c. a
- d. b

Ans. b

Explanation:

Mars and Venus are planets. So we can say that all Mars and Venus are Planets but no Mars is Venus.

The Venn diagram that best represents the relationship between the given set of classes.



Hence, "option 2" is the correct answer

32. Name the compendium of Digital India which was released in 2019?

- a. Digital Bharat, Unnat Bharat
- b. Digital Bharat, Saksham Bharat
- c. Nayi Udaan, Digital Bharat
- d. Digital India, Educated India

Ans. b

Explanation:

The correct answer is Digital Bharat, Saksham Bharat.

Key Points

A Digital India Compendium on Digital Bharat, Saksham Bharat was released in 2019.

33. What is the name of India's first manned space flight?

- a. Gaganyaan
- b. Vayuyaan
- c. Pushpakyaan
- d. Gagan Viman

Ans. a

Explanation:

The correct answer is Gaganyaan.

ISRO's Gagan maan Mission is India's maiden manned space mission.

34. In 2019, the Uttar Pradesh government created a world record by planning over 22 crore saplings in one day on 77th anniversary of the _____.

- a. Chipko Andolan
- b. Quit India Movement
- c. Narmada Bachao Andolan
- d. Dandi March

Ans. b

Explanation:

The correct answer is Quit India Movement.

Uttar Pradesh launched the 'Vriksharopan Mahakumbh' campaign to commemorate the 77th anniversary of the Quit India movement.

35. Solve the following.

$$5 + 3 \times 72 \div 24 - 12 = ?$$

- a. 12
- b. - 22
- c. 113
- d. 2

Ans. d

Explanation:

Given:

$$5 + 3 \times 72 \div 24 - 12 = ?$$

Calculation:

$$5 + 3 \times 72 \div 24 - 12 = ?$$

$$\Rightarrow 5 + 3 \times 3 - 12 = ?$$

$$\Rightarrow 5 + 9 - 12 = ?$$

$$\Rightarrow 14 - 12 = ?$$

$$\therefore 2 = ?$$

36. Which organization has been the successor of GATT?

- a. ILO
- b. ECOSOC
- c. UNCTAD
- d. WTO

Ans. d

Explanation:

The correct answer is WTO.

The World Trade Organization (WTO) is the successor to the General Agreement on Tariffs and Trade (GATT).

37. Twelve men can complete a task in 16 days. Thirty-two women can complete the same task in 12 days. Eight men and eight women together worked for 12 days, after which the women dropped and 8 men joined. In how many days the men will be able to complete the remaining task?

- a. 3 days
- b. 9 days
- c. 10 days
- d. 2 days

Ans. a

Explanation:

Given:

Time taken by 12 men to do a task = 16 days

Time taken by 32 women to do the same task = 12 days

Formulas used:

Total work = (No of persons) × Time

Calculation:

12 men × 16 days = 32 women × 12 days

⇒ 1 Man = 2 Women

Total work in terms of men = 12 × 16 = 192 units

Work done by (8 men + 8 women) in 12 days = (8 men + 4 men) × 12 = 12 × 12 = 144 units

Remaining work after which women left = 192 units - 144 units = 48 units

Now, 8 more men joined, total men will be (8 + 8) = 16

∴ No of days taken by 16 men to complete the remaining task = 48 units/16

⇒ 3 days

38. If 140 g brass is mixed with copper to prepare an alloy having brass and copper in the ratio 4 : 3, then how much copper has been taken to prepare the alloy?

a. 245 g

b. 105 g

c. 60 g

d. 80 g

Ans. b

Explanation:

Given:

Quantity of brass mixed with copper = 140 g

Desired ratio of brass and copper = 4 : 3

Calculation:

Let the quantity of brass and copper be 4a and 3a respectively.

4a = 140g

⇒ a = 140/4 g

⇒ a = 35 g

∴ The quantity taken of copper to prepare the alloy = 3a = 3 × 35

⇒ 105 g

39. The 5th volume of which dictionary was released by Prime Minister Narendra Modi in 2019?

- a. Dictionary of Terms**
- b. Dictionary of Vedas**
- c. Dictionary of Idioms and Phrases**
- d. Dictionary of Martyrs**

Ans. d

Explanation:

The correct answer is Dictionary of Martyrs.

The fifth volume of "Dictionary of Martyrs" was released by Prime Minister Narendra Modi in 2019.

40. Between which two countries has an MOU been signed on co-operation in the field of peaceful use of outer space in January 2019?

- a. India and Germany**
- b. India and Iran**
- c. India and Finland**
- d. India and Denmark**

Ans. c

Explanation:

The correct answer is India and Finland.

India and Finland signed an MOU on co-operation in the field of peaceful use of outer space in January 2019

41. Name the monument which is a testimony to successful restoration and preservation of an archaeological site.

- a. Sanchi Stupa**
- b. Palika Bazaar**
- c. Gateway of India**
- d. India Gate**

Ans. a

Explanation:

The correct answer is Sanchi Stupa.

Sanchi Stupais one of the best-preserved and studied Buddhist sites in India.

It is situated in Madhya Pradesh.

42. Elements in the modern periodic table are arranged in _____ vertical columns.

- a. 9
- b. 12
- c. 18
- d. 16

Ans. c

Explanation:

The correct answer is 18.

Modern Periodic Table arranges the elements in the order of their atomic numbers in:

Seven horizontal rows (periods).

Eighteen vertical columns (groups or families).

43. In the following series, how many times is the number 0 immediately followed by number 2?

2 1 3 2 5 0 2 7 8 0 2 0 3 4 5 2 0 2 0 7 8

- a. 4
- b. 5
- c. 6
- d. 3

Ans. d

Explanation:

In this question, number 0 immediately followed by number 2 is (02) -

2 1 3 2 5 0 2 7 8 0 2 0 3 4 5 2 0 2 0 7 8

The number 0 is immediately followed by the number 2 three times as is highlighted above in bold.

Hence, "3" is the correct answer.

44. International day of Multilateralism and Diplomacy is celebrated on

_____.

- a. 21st June
- b. 4th January
- c. 3rd May
- d. 24th April

Ans. d

Explanation:

The correct answer is 24 th April.

International day of Multilateralism and Diplomacy is celebrated on 24th April.

45. Who is the author of 'Politics of Jugaad: The Coalition Handbook'?

- a. Saba Naqvi**
- b. Chetan Bhagat**
- c. Jhumpa Lahiri**
- d. Tom Hanks**

Ans. a

Explanation:

The correct answer is Saba Naqvi.

Saba Naqvi is the best-known journalist in India.

46. Who was the Governor General at the time of sepoy mutiny?

- a. Lord Hastings**
- b. Lord Dalhousie**
- c. Lord Canning**
- d. Lord Cornwallis**

Ans. c

Explanation:

The correct answer is Lord Canning.

During the 'Sepoy Mutiny,' Lord Canning was the Governor-General of India.

47. Solve the following.

$$3.03 + 31.003 + 13.33 + 3.331$$

- a. 3.597**
- b. 35.97**
- c. 50.694**
- d. 50.370**

Ans. c

Explanation:

Given:

$$3.03 + 31.003 + 13.33 + 3.331$$

Calculation:

$$3.03 + 31.003 + 13.33 + 3.331$$

$$\Rightarrow 34.033 + 16.661$$

$$\Rightarrow 50.694$$

\therefore The required result = 50.694

48. Select the number from among the given options that can replace the question mark (?) in the following series.

3, E, 8, L, ?

a. 11

b. 17

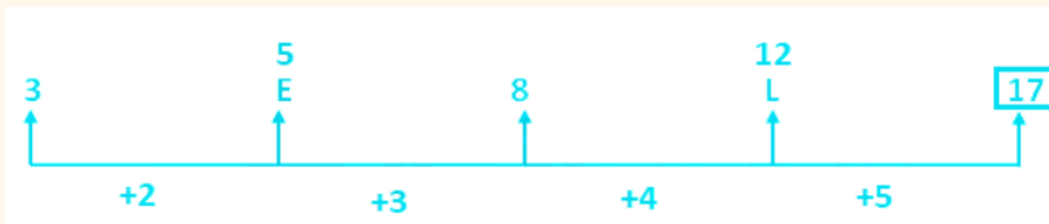
c. 19

d. 23

Ans. b

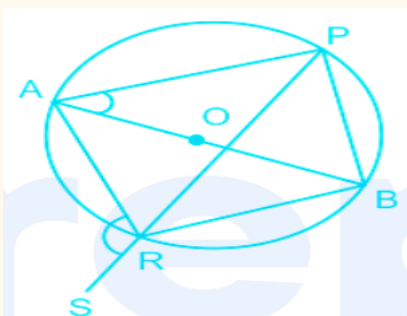
Explanation:

The logic followed here is:



Hence, "17" is the correct answer.

49. In the figure, O is the centre of the circle. If $\angle ARS = 125^\circ$ then find the measure of $\angle PAB$.



- a. 35°
- b. 125°
- c. 55°
- d. 145°

Ans. a

Explanation:

Given:

$$\angle ARS = 125^\circ$$

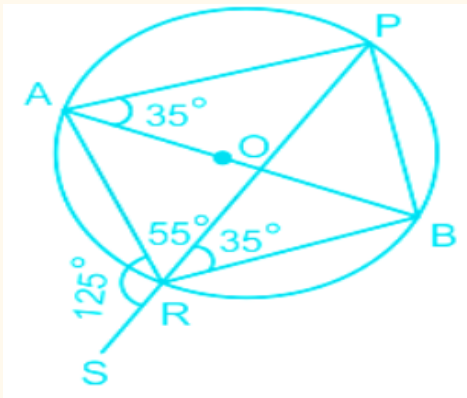
Concept:

Angle made in a semi-circle is a right angle.

Angles formed in the same segment of a circle will be equal in measure.

Calculation:

BR is formed by joining B and R.



$$\angle ARS + \angle ARP = 180^\circ \text{ [Linear Pair]}$$

$$\Rightarrow \angle ARP = 180^\circ - 125^\circ = 55^\circ$$

$$\angle ARB = 90^\circ \text{ [Angle made in semi-circle]}$$

$$\Rightarrow \angle ARP + \angle BRP = 90^\circ$$

$$\Rightarrow \angle BRP = 90^\circ - 55^\circ = 35^\circ$$

$$\angle BRP = \angle PAB = 35^\circ \text{ [Angles made in the same segment]}$$

$$\therefore \angle PAB = 35^\circ$$

50. Grandfather of Sukhdev and Baldev divided an amount of Rs.2,150 among them in the ratio 20 : 23. They both donated Rs.100 each for charity out of their shares. What will be the ratio of their respective amounts?

- a. 6 : 7

- b. 19 : 22
- c. 80 : 77
- d. 120 : 123

Ans. a

Explanation:

Given:

Sharing ratio of the amount to be divided between Sukhdev and Baldev = 20 : 23

Amount to be divided between Sukhdev and Baldev = Rs.2150

Calculation:

Share of Sukhdev = $2150 \times \frac{20}{43} = 1000$

Share of Sukhdev after donating = Rs.1000 - Rs.100 = Rs.900

Share of Baldev = $2150 \times \frac{23}{43} = \text{Rs.}1150$

Share of Baldev after donating = Rs.1150 - Rs.100 = Rs.1050

\therefore New ratio of the shares of Sukhdev and Baldev = 900 : 1050

$\Rightarrow 6 : 7$

51. Express $0.\overline{037}$ in the form of $\frac{p}{q}$ where p is a whole number and q is a natural number.

a. $\frac{17}{45}$

b. $\frac{34}{99}$

c. $\frac{37}{1000}$

d. $\frac{17}{450}$

Ans. d

Explanation:

Given:

Expression =

$\Rightarrow 0.0377777\ldots$

Calculation:

Let $0.0377777\ldots = x$ (1)

By multiplying (1) by 100

$\Rightarrow 3.7777\ldots = 100x$ (2)

By multiplying (1) by 1000

$\Rightarrow 37.7777\ldots = 1000x$ (3)

By (3) - (2)

$$\Rightarrow 37.7777\text{.....} - 3.7777\text{.....} = 1000x - 100x$$

$$\Rightarrow 34 = 900x$$

$$\Rightarrow x = 34/900$$

$$\Rightarrow x = 17/450$$

\therefore $0.\overline{037}$ or 0.037777..... in the form of p/q is $17/450$.

52. Which of the following shapes is most similar to rectangle and square?

- a. Rhombus
- b. Triangle
- c. Circle
- d. Sphere

Ans. a

Explanation:

The correct answer is Rhombus.

A rhombus is a type of parallelogram.

53. How many numbers from 3 to 60 are odd numbers that are exactly divisible by 5?

- a. 6
- b. 5
- c. 8
- d. 7

Ans. a

Explanation:

Given:

Numbers from 3 to 60.

Concept:

Divisibility by 5 = If a number ends with 0 or 5, it will be divisible by 5.

Calculation:

The given numbers are; 3, 4, 5, 6, 7, 8, 9, 1060

Odd numbers from the following series which are divisible by 5 are as follows;

\Rightarrow 5, 15, 25, 35, 45, and 55.

\therefore The required result = 6

54. Which was the venue of final match of ICC Men's Cricket World Cup 2019?

- a. Edgbaston, Birmingham
- b. Bristol County Ground, Bristol
- c. Lord's London
- d. The Oval, London

Ans. c

Explanation:

The correct answer is Lord's, London.

ICC Men's Cricket World Cup 2019 final match was held at Lord's in London.

55. If SUN is coded as 54, then how will MOON be coded as?

- a. 55
- b. 56
- c. 57
- d. 58

Ans. c

Explanation:

The logic followed here is:

Positional value of S = 19, U = 21, N = 14

$SUN = 19 + 21 + 14 = 54.$

Similarly,

Place value of M = 13, O = 15, O = 15, N = 14

$MOON = 13 + 15 + 15 + 14 = 57.$

Hence, "57" is the correct answer.

56. After independence, during the second Five Year Plan (1956-61), which steel plant was set up with the collaboration of west Germany

- a. Rourkela Steel Plant
- b. Durgapur Steel Plant
- c. Bhilai Steel Plant
- d. Bokaro Steel Plant

Ans. a

Explanation:

The correct answer is Rourkela Steel Plant.

Rourkela Steel Plant is located in Rourkela, Odisha.

57. The International Gandhi Peace Prize 2018 was given to _____ by the President of India.

- a. Akshay Patra Foundation
- b. Sulabh International
- c. Vivekananda Kendra
- d. Yohei Sasakawa

Ans. d

Explanation:

The correct answer is Yohei Sasakawa.

The International Gandhi Peace Prize 2018 was given to Yohei Sasakawa by the President of India.

58. Solve the following.

$$\sqrt{\sqrt{37 + \sqrt{130 + 2\sqrt{56 - \sqrt{16 - \sqrt{9}}}}} = ?$$

- a. 252
- b. 200
- c. 229
- d. 7

Ans. d

Explanation:

Given:

$$\sqrt{\sqrt{37 + \sqrt{130 + 2\sqrt{56 - \sqrt{16 - \sqrt{9}}}}} = ?$$

Calculation:

$$\sqrt{\sqrt{37 + \sqrt{130 + 2\sqrt{56 - \sqrt{16 - \sqrt{9}}}}} = ?$$

$$\sqrt{37 + \sqrt{130 + 2\sqrt{56 - 4 - 3}}} = ?$$

$$\sqrt{37 + \sqrt{130 + 2\sqrt{49}}} = ?$$

$$\sqrt{37 + \sqrt{130 + 2 \times 7}} = ?$$

$$\sqrt{37 + \sqrt{144}} = ?$$

$$\sqrt{37 + 12} = ?$$

$$\sqrt{49} = ?$$

$$\Rightarrow 7 = ?$$

∴ The value of ? is 7.

59. The length of a rectangle is 2 m less than thrice its breadth. If its perimeter is 28 m, find its breadth.

a. 10 m

b. 4 m

c. 6 m

d. 7.5 m

Ans. b

Explanation:

Given:

The length of a rectangle = 2 m less than thrice its breadth

Perimeter of the rectangle = 28 m

Formula used:

Perimeter of a rectangle = 2(Length + Breadth)

Calculation:

Let the breadth be = b

$$28 \text{ m} = 2 [(3b - 2) + b]$$

$$\Rightarrow 28 = 2 [4b - 2]$$

$$\Rightarrow 28 = 8b - 4$$

$$\Rightarrow 8b = 28 + 4 = 32$$

$$\Rightarrow b = 32/8 = 4 \text{ m}$$

∴ The breadth of the rectangle is 4 m.

60. Which of the following leaders signed the Tashkent Agreement?

a. Vallabhbhai Patel and Jinnah

b. Jawaharlal Nehru and Ayub Khan

c. Lal Bahadur Shastri and Ayub Khan

d. Jawaharlal Nehru and Jinnah

Ans. c

Explanation:

The correct answer is Lal Bahadur Shastri and Ayub Khan.

On January 10, 1966, Lal Bahadur Shastri and Pakistan's then-President Muhammad Ayub Khan signed the Tashkent Agreement.

61. Why do stars twinkle in the sky at night?

- a. Due to atmospheric refraction of starlight**
- b. Due to hot air**
- c. Due to advance light**
- d. Due to dispersion of light**

Ans. a

Explanation:

The correct answer is Due to the atmospheric refraction of starlight.

Stars twinkle in the sky at night due to the atmospheric refraction of starlight.

62. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some apples are grapes.

Some grapes are mangoes.

Conclusions:

I. All apples are mangoes.

II. Some mangoes are apples.

- a. only conclusion I follows.**
- b. Neither conclusion I nor II follows.**
- c. Either conclusion I or II follows.**
- d. Only conclusion II follows.**

Ans. b

Explanation:

The least possible Venn diagram is as follows:



Conclusions:

I. All apples are mangoes. - Does not follow (it is possible but not definite)

II. Some mangoes are apples.- - Does not follow (it is possible but not definite)

Thus, neither conclusion I nor II follows from the given statements.

Hence, "option 2" is the correct answer

63. If the letters of the word UNIVERSITY are arranged in alphabetical order, then which letter will be seventh from the left end?

- a. N
- b. T
- c. U
- d. S

Ans. b

Explanation:

If the letters of the word UNIVERSITY are arranged in alphabetical order then we get the following:

E I I N R S T U V Y

The seventh letter from the left end is T as shown below -

E I I N R S T U V Y

Hence, "T" is the correct answer.

64. In the respiration process, complex organic compounds such as glucose are broken down to provide energy in the form of _____

- a. PTA
- b. NAC
- c. CAL
- d. ATP

Ans. d

Explanation:

The correct answer is ATP.

ATP is the organic compound composed of the phosphate groups, adenine, and sugar ribose.

65. Which ministry of Government of India has published Goods and Service Tax (GST) Act, 2017

- a. Office of the Prime Minister
- b. Ministry of Finance
- c. Ministry of Corporate Affairs
- d. Ministry of Law and Justice

Ans. d

Explanation:

The correct answer is Ministry of Law and Justice.

The Goods and Service Tax (GST) Act, 2017 was published by the Ministry of Law and Justice.

66. _____ deciphered Brahmi and Kharosthi scripts that were used for earlier inscriptions.

- a. James Prinsep
- b. Cunningham
- c. Wheeler
- d. Marshall

Ans. a

Explanation:

The correct answer is James Prinsep.

James Prinsep was an English scholar and the founding editor of the Journal of the Asiatic Society of Bengal.

67. By selling an article for Rs.1,360, a dealer losses 15%. At what price should he sell the article to gain 10%?

- a. Rs. 1,360
- b. Rs. 1,760
- c. Rs. 1,560
- d. Rs. 1,600

Ans. b

Explanation:

Given:

Selling Price of article = Rs.1360

Loss percentage = 15%

Formulas used:

Selling Price = Cost Price \times (100 - Loss)%

Selling Price = Cost Price \times (100 + Profit)%

Calculation:

Profit or loss both are calculated on the Cost Price of the article, which is 100% of itself.

At 15% loss, Selling Price = 1360

\Rightarrow (100 - 15)% of Cost Price = 1360

\Rightarrow 85% of Cost Price = 1360

\Rightarrow 100% of Cost Price = $1360 \times 100\%/85\%$

\Rightarrow Cost Price = Rs.1600

Selling Price at profit of 10%;

(100 + 10)% of Cost Price = Rs.1600 \times 110/100

\Rightarrow 110% of Cost Price = Rs.1760

\therefore Selling Price of the article at 10% profit is Rs.1760

68. Artificial fertilizers were first created during the _____ century.

- a. 19th
- b. 16th
- c. 18th
- d. 17th

Ans. a

Explanation:

The correct answer is 19 th

Artificial fertilizers were first created during the 19th century.

69. Which of the following, like the Chipko Movement, aims to protect forests in the Uttara Kannada district?

- a. Narmada Bachao Andolan
- b. Al Baydha Project
- c. Appiko Movement
- d. Delhi Chalo Movement

Ans. c

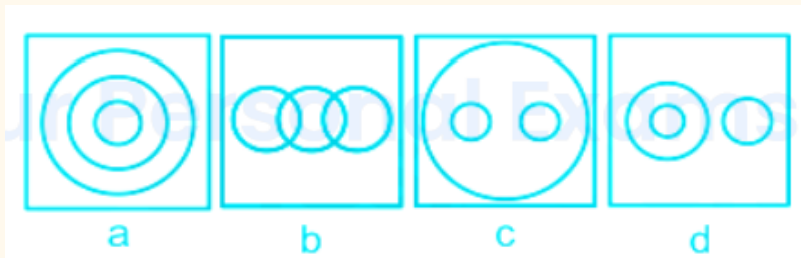
Explanation:

The correct answer is Appiko Movement.

Appiko Movement Is an environment protection movement like the Chipko Movement, aims to protect forests in the Uttara Kannada district.

70. Select the Venn diagram that best represents the relationship between the given set of classes.

Year, Month, Day



a. b

b. a

c. d

d. c

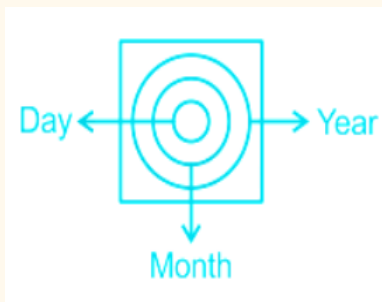
Ans. b

Explanation:

A year has 12 months.

A month has 28 or 29 or 30 or 31 days.

The Venn diagram that best represents the relationship between the given set of classes:



Hence, "option 2" is the correct answer

71. What is the HCF of 52 and 100?

- a. 44
- b. 4
- c. 52
- d. 48

Ans. b

Explanation:

Given:

Two numbers = 52, 100

Concept:

HCF = Highest Common Factor

HCF means the Highest Common Factor .T he largest number that divides two or more numbers is the highest common factor (HCF) for those numbers .

Calculation:

By prime factorization;

$$52 = 2 \times 2 \times 13$$

$$100 = 2 \times 2 \times 5 \times 5$$

$$\therefore \text{HCF} (52, 100) = 4$$

72. Which type of mirror is used by dentists to see large images of patients' teeth?

- a. Convex mirror
- b. Spherical and Convex mirror
- c. Concave mirror
- d. Spherical mirror

Ans. c

Explanation:

The correct answer is Concave mirror.

A Concave mirror is used by dentists to see large images of patients' teeth.

73. If $\sqrt{3} \sin \theta - \cos \theta = 0$ (θ is an acute angle), then the value of $\cos^3 \theta - \sqrt{3} \sin^3 \theta$ will be:

- a. -1

b. $\frac{\sqrt{3}}{4}$

c. $\frac{\sqrt{3}}{2}$

d. $\frac{3}{8}$

Ans. b

Explanation:

Given:

$$\sqrt{3} \sin \theta - \cos \theta = 0 \quad (\theta \text{ is an acute angle})$$

Calculation:

$$\sqrt{3} \sin \theta - \cos \theta = 0$$

$$\Rightarrow \sqrt{3} \sin \theta = \cos \theta$$

$$\Rightarrow \sin \theta / \cos \theta = 1/\sqrt{3}$$

$$\Rightarrow \tan \theta = \tan 30^\circ$$

$$\Rightarrow \theta = 30^\circ$$

$$\cos^3 \theta - \sqrt{3} \sin^3 \theta$$

$$\Rightarrow (\sqrt{3}/2)$$

$$3 - \sqrt{3} \times (1/2)^3 \quad \because [\cos 30^\circ = \sqrt{3}/2, \sin 30^\circ = 1/2]$$

$$\Rightarrow 3\sqrt{3}/8 - \sqrt{3} \times 1/8$$

$$\Rightarrow 3\sqrt{3}/8 - \sqrt{3}/8$$

$$\Rightarrow \sqrt{3}(3 - 1)/8$$

$$\Rightarrow 2\sqrt{3}/8$$

$$\Rightarrow \sqrt{3}/4$$

\therefore The required value is $\sqrt{3}/4$.

74. Solve the following.

$$\left\{1 - \frac{1}{4}\right\} \left\{1 - \frac{2}{4}\right\} \dots \left\{1 - \frac{5}{4}\right\} \left\{1 - \frac{6}{4}\right\} = ?$$

a. $\frac{3}{64}$

b. $\frac{3}{256}$

c. 0

d. $-\frac{3}{256}$

Ans. c

Explanation:

Given:

$$\left\{1 - \frac{1}{4}\right\}\left\{1 - \frac{2}{4}\right\}\dots\left\{1 - \frac{5}{4}\right\}\left\{1 - \frac{6}{4}\right\} = ?$$

Calculation:

$$\left\{1 - \frac{1}{4}\right\}\left\{1 - \frac{2}{4}\right\}\dots\left\{1 - \frac{5}{4}\right\}\left\{1 - \frac{6}{4}\right\} = ?$$

$$\Rightarrow \left\{\frac{4-1}{4}\right\} \times \left\{\frac{4-2}{4}\right\} \times \left\{\frac{4-3}{4}\right\} \times \left\{\frac{4-4}{4}\right\} \times \left\{\frac{4-5}{4}\right\} \times \left\{\frac{4-6}{4}\right\} = ?$$

$$\Rightarrow \frac{3}{4} \times \frac{2}{4} \times \frac{1}{4} \times 0 \times \left(-\frac{1}{4}\right) \times \left(-\frac{2}{4}\right) = ?$$

$$\Rightarrow 0 = ?$$

∴ The required result = 0

75. What protects the earth from the ultraviolet radiation of the sun?

- a. Magnesium
- b. Nitrogen
- c. Ozone
- d. Oxygen

Ans. c

Explanation:

The correct answer is Ozone.

Ozone protects the earth from the ultraviolet radiation of the sun

76. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some shirts are pants.

All pants are coats.

Some coats are shoes.

Conclusions:

I. Some pants are shoes.

II. Some shirts are coats.

III. All shirts are coats.

IV. No pants are shoes.

a. Either conclusion I or II follows.

b. Either conclusion I or II and IV follow.

c. Only conclusion III follows.

d. Only conclusion II follows.

Ans. d

Explanation:

The least possible Venn diagram is as follows:



Conclusions:

- I. Some pants are shoes. - Does not follow (it is possible but not definite)
- II. Some shirts are coats. - Follows (the part of shirts that is pants is coats)
- III. All shirts are coats. - Does not follow (it is possible but not definite)
- IV. No pants are shoes. - Does not follow (it is possible but not definite)

Hence, only conclusion II follows.

Hence, "option 4" is the correct answer.

77. The LCM of two numbers is 91 times their HCF. The sum of the HCF and LCM is 2760. If one of the numbers is 210, the other number will be:

- a. 2730**
- b. 420**
- c. 30**
- d. 390**

Ans. d

Explanation:

Given:

LCM of two numbers = $91 \times \text{HCF}$

The sum of the HCF and LCM = 2760

One of the numbers = 210

Concept:

Product of two numbers = $\text{HCF} \times \text{LCM}$

Calculation:

Let the other number be = b

HCF + LCM = 2760
⇒ HCF + 91 × HCF = 2760
⇒ 92 × HCF = 2760
⇒ HCF = 2760/92
⇒ HCF = 30
∴ LCM = 91 × 30 = 2730
Product of two numbers = HCF × LCM
⇒ 210 × b = 30 × 2730
⇒ b = 30 × 2730/210
⇒ b = 390
∴ The other number is 390.

78. The mean of ages of 9 children in a joint family is 14 years. The ages of their grandfather and grandmother are 71 years and 67 years respectively. Find the mean of the ages of children and grandparents.

- a. 16 years
- b. 51 years
- c. 25 years
- d. 24 years

Ans. d

Explanation:

Given:

The mean of 9 children = 14 years

Age of grandfather = 71 years

Age of grandmother = 67 years

Formula used:

Mean Age = (Total age of persons)/(Number of persons)

Calculation:

Mean of the ages of 9 children and grandparents = (14 years × 9 + 71 years + 67 years)/(9 + 2)

⇒ 264/11

⇒ 24 years

∴ The mean of the ages of children and grandparents is 24 years.

79. In which of the following cities was the 45th G7 summit held in 2019?

- a. New York

- b. London**
- c. Biarritz**
- d. Tokyo**

Ans. c

Explanation:

The correct answer is Biarritz.

Key Points

The 45th G7 summit was held in Biarritz, France.

80. Which of the United Nation's organization has the International Institute of Educational Planning at Paris as its Part?

- a. UNICEF**
- b. ILO**
- c. UNESCO**
- d. UNU**

Ans. c

Explanation:

The correct answer is UNESCO.

Important Points

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) is an international organisation that promotes education, science, and culture.

81. Ribosomes make _____.

- a. starch**
- b. fats**
- c. proteins**
- d. lipids**

Ans. c

Explanation:

The correct answer is proteins.

Ribosomes are non-membrane bound organelles found in both eukaryotic and prokaryotic cells.

Ribosomes make proteins.

82. Who among the following won the Nobel Peace Prize in the year 2019?

- a. Abiy Ahmed**
- b. Bn Bardeen**
- d. Rainer Weiss**

Ans. a

Explanation:

The correct answer is Abiy Ahmed.

Abiy Ahmed Ali is the 4th Prime Minister of Ethiopia.

83. Information and Communication Technology (ICT), now integrated under RMSA was launched in the year _____.

- a. 2006**
- b. 2004**
- c. 2002**
- d. 2009**

Ans. b

Explanation:

The correct answer is 2004.

The Information and Communication Technology (ICT) in Schools was launched in December 2004.

84. The sum of the zeros of the polynomial

$5x^2 + (5p - 1)x - (2p + 5)$ is the same as one fourth of their product. Find the value of p.

- a. $-\frac{1}{2}$**
- b. 2**
- c. -2**
- d. $\frac{1}{2}$**

Ans. d

Explanation:

Given:

Sum of the zeros of the polynomial $5x^2 + (5p - 1)x - (2p + 5) = \frac{1}{4} \times$ Product of zeros

Formulas used:

Standard form of polynomial, $ax^2 + bx + c = 0$

$$2 + bx + c = 0$$

Sum of the zeros = $-b/a$

Product of the zeros = c/a

Calculation:

$$\text{Sum of the zeros} = -(5p - 1)/5$$

$$\text{Product of zeros} = -(2p + 5)/5$$

As per the question;

$$\Rightarrow -(5p - 1)/5 = 1/4 \times [-(2p + 5)/5]$$

$$\Rightarrow (5p - 1) = (2p + 5)/4$$

$$\Rightarrow 20p - 4 = 2p + 5$$

$$\Rightarrow 20p - 2p = 5 + 4$$

$$\Rightarrow 18p = 9$$

$$\Rightarrow p = 9/18 = 1/2$$

\therefore The value of $p = 1/2$

85. Which is the Sixth largest country of the world in terms of area?

- a. Brazil
- b. China
- c. India
- d. Australia

Ans. d

Explanation:

The correct answer is Australia.

Australia is the sixth-largest country in the world in terms of area.

86. The following are the weights (in kg) of 25 students:

58, 55, 53, 50, 53, 51, 52, 54, 53, 52, 54, 53, 58, 53, 59, 55, 53, 52, 51, 54, 53, 59, 55, 53, 52 What is the weight (in kg) of the heaviest student?

- a. 56
- b. 58
- c. 59
- d. 55

Ans. c

Explanation:

Given:

Weights (in kg) of 25 students:

58, 55, 53, 50, 53, 51, 52, 54, 53, 52, 54, 53, 58, 53, 59, 55, 53, 52, 51, 54, 53, 59, 55, 53, 52

Calculation:

By observing the data given, we observe that 59 kg is the largest number present.

∴ The weight (in kg) of the heaviest student is 59 kg

87. The following are the weights (in kg) of 25 students:

58, 55, 53, 50, 53, 51, 52, 54, 53, 52, 54, 53, 58, 53, 59, 55, 53, 52, 51, 54, 53, 59, 55, 53, 52 What is the most commonly observed weight (in kg)?

a. 53

b. 54

c. 52

d. 55

Ans. a

Explanation:

Given:

The following are the weights (in kg) of 25 students:

58, 55, 53, 50, 53, 51, 52, 54, 53, 52, 54, 53, 58, 53, 59, 55, 53, 52, 51, 54, 53, 59, 55, 53, 52

Concept:

Mode = It is the value that appears most often in a set of data values.

Calculation:

Weights of the 25 students in ascending order are as follow:

50, 51, 51, 52, 52, 52, 52, 53, 53, 53, 53, 53, 53, 53, 53, 54, 54, 54, 55, 55, 55, 58, 58, 59, 59

53 kg weight has the highest frequency of 8 times.

∴ By observing the above data, we can conclude that 53 kg is the most commonly observed weight.

88. The following are the weights (in kg) of 25 students:

58, 55, 53, 50, 53, 51, 52, 54, 53, 52, 54, 53, 58, 53, 59, 55, 53, 52, 51, 54, 53, 59, 55, 53, 52

Among the following options, what is the weight (in kg) that appears least number of times in the given data?

a. 52

b. 50

c. 58

d. 54

Ans. b

Explanation:

Given:

The following are the weights (in kg) of 25 students:

58, 55, 53, 50, 53, 51, 52, 54, 53, 52, 54, 53, 58, 53, 59, 55, 53, 52, 51, 54, 53, 59, 55, 53, 52

Calculation:

Weights of the 25 students in ascending order are as follow:

50, 51, 51, 52, 52, 52, 52, 53, 53, 53, 53, 53, 53, 53, 53, 54, 54, 54, 55, 55, 55, 58, 58, 59, 59

Weight 50 kg has the lowest frequency, 1 in the given set of data values.

∴ 50 kg appears least number of times in the given data.

89. The following are the weights (in kg) of 25 students:

58, 55, 53, 50, 53, 51, 52, 54, 53, 52, 54, 53, 58, 53, 59, 55, 53, 52, 51, 54, 53, 59, 55, 53, 52

What is the range of the given data?

a. 7

b. 8

c. 6

d. 9

Ans. d

Explanation:

Given:

The following are the weights (in kg) of 25 students:

58, 55, 53, 50, 53, 51, 52, 54, 53, 52, 54, 53, 58, 53, 59, 55, 53, 52, 51, 54, 53, 59, 55, 53, 52

Concept:

Range = It is the difference between the highest and lowest values in a given data.

Calculation:

Highest weight = 59 kg

Lowest weight = 50 kg

Range = $59 - 50 = 9$

∴ The required result is 9

90. Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

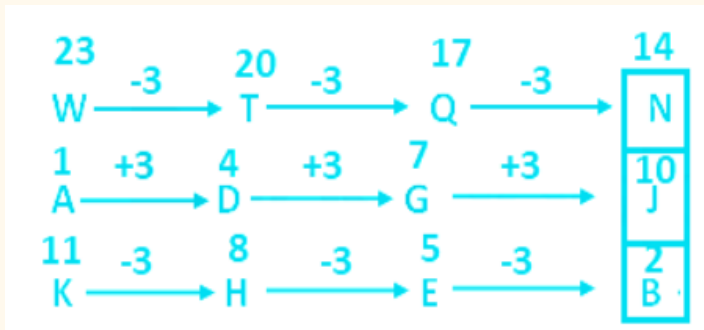
WAK, TDH, QGE, ?

- a. NJA
- b. MJA
- c. MJB
- d. NJB

Ans. d

Explanation:

The logic followed here is:



Hence, "NJB" is the correct answer.

91. Four publications have been listed, out of which three are alike in some manner and one is different. Select the odd one.

- a. Hindustan Times
- b. India Today
- c. The Indian Express
- d. The Hindu

Ans. b

Explanation:

Hindustan Times, The Indian Express, and The Hindu are newspapers, and India Today is a magazine.

So India Today is different from others.

Hence, "India Today" is the correct answer.

92. Select the combination of letters that when sequentially placed in the

blanks will create a repetitive pattern.

c_bca_c_bc_b

- a. abcc
- b. abbc
- c. abac
- d. abaa

Ans. d

Explanation:

Let's check each option:

- 1. c ab - ca b - cc b - c cb. - No repetitive pattern
- 2. c ab - ca b - cb b - c cb. - No repetitive pattern
- 3. c ab - ca b - ca b - c cb. - No repetitive pattern
- 4. c ab - ca b - ca b - c ab. - The term "cab" is repeated

Hence, "abaa" is the correct answer.

93. Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

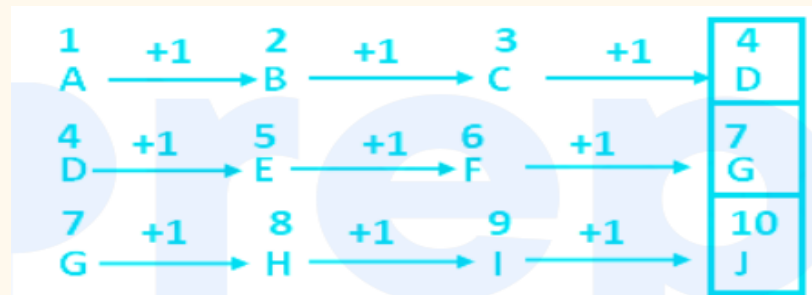
ADG, BEH, CFI, ?

- a. DGJ
- b. DGH
- c. DGK
- d. DFH

Ans. a

Explanation:

The logic followed here is:



Hence, "DGJ" is the correct answer

94. 'Church' is related to 'Christians' in the same way 'Synagogue' is related to '_____':

- a. Jews
- b. Muslims
- c. Jains
- d. Parsis

Ans. a

Explanation:

The logic followed here is:

A church is a place of worship for Christians.

Similarly,

A synagogue is a place of worship for Jews.

95. If 'P' means '+', 'Q' means '-', 'R' means '×' and 'S' means '÷', then find the value of the following expression.

$$\frac{2}{3} S \frac{1}{3} Q 7 P 7 R 5$$

- a. 10
- b. 50
- c. 30
- d. 40

Ans. c

Explanation:

The logic followed here is :

$$\text{Given expression is : } \frac{2}{3} S \frac{1}{3} Q 7 P 7 R 5$$

Replacing the signs as per the given directions and using the BODMAS rule:

$$= 2 / 3 \div 1 / 3 - 7 + 7 \times 5$$

$$= 2 / 3 \times 3 - 7 + 7 \times 5$$

$$= 2 - 7 + 35$$

$$= 37 - 7$$

$$= 30$$

Hence, the correct answer is "30".

96. In a row of 12 students, when Karan was shifted by three places towards the right, he became fifth from the right end. What was his earlier position from the left end?

- a. Sixth
- b. Fifth
- c. Seventh
- d. Eighth

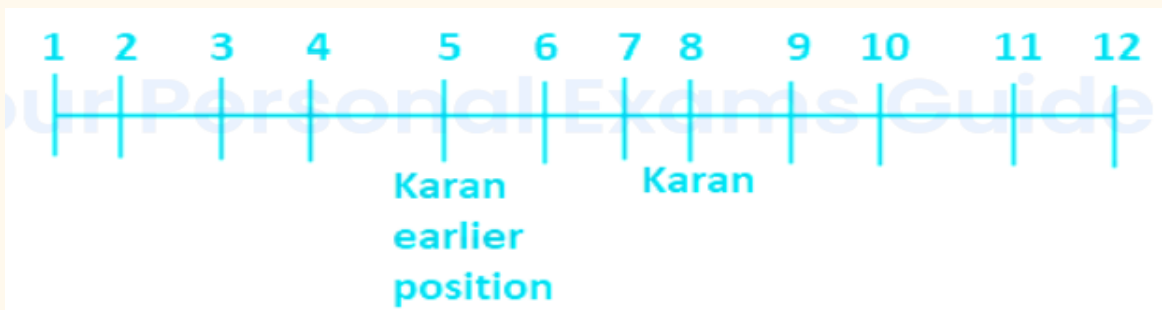
Ans. b

Explanation:

In a row of 12 students, Karan's new position = 5th from the right end

Therefore, Karan's new position from the left = $12 - 5 + 1 = 8$ th from the left end

Karan's earlier position from the left = Karan's new position from the left - 3 = $8 - 3 = 5$ th from the left end.



Hence, "Fifth" is the correct answer.

97. Select the number from among the given options that can replace the question mark (?) in the following series.

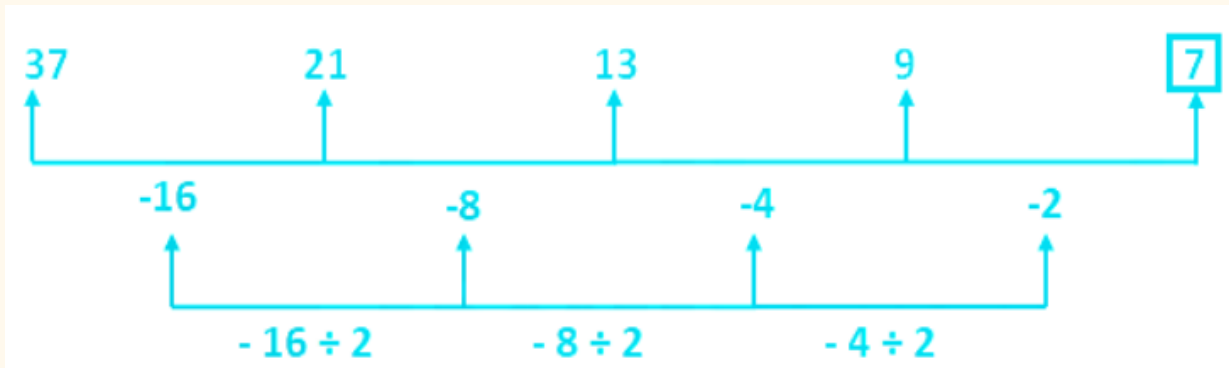
37, 21, 13, 9, ?

- a. 7
- b. 8
- c. 10
- d. 12

Ans. a

Explanation:

The logic followed here is:



Hence, "7" is the correct answer

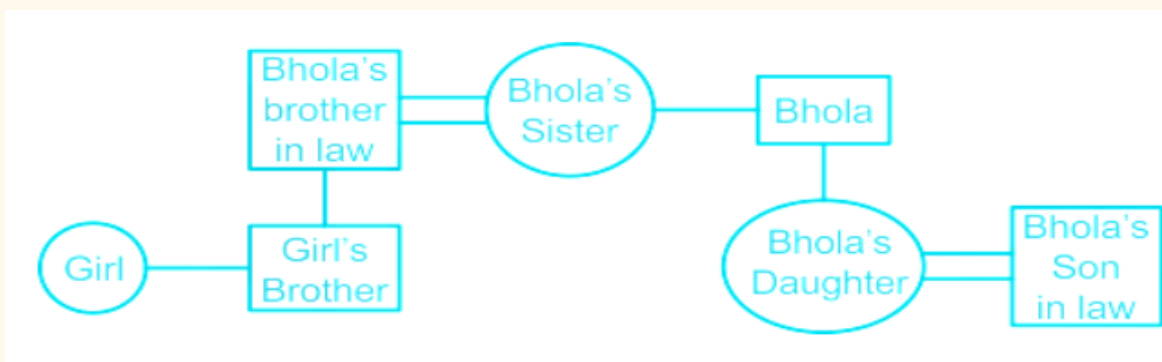
98. Introducing a girl to his son-in-law, Bhola said, "Her brother is the only son of my brother-in-law." How is the girl related to Bhola?

- a. Daughter
- b. Sister-in-law
- c. Sister
- d. Niece

Ans. d

Explanation:

The family tree are given below -



Girl is the niece of Bhola.

Hence, "Niece" is the correct answer.

99. 'Manipur' is related to 'Imphal' in the same way as 'Nagaland' is related to '_____':

- a. Aizawl
- b. Gangtok
- c. Shillong
- d. Kohima

Ans. d

Explanation:

The logic followed here is:

Imphal is the capital city of Manipur.

Similarly,

Kohima is the capital city of Nagaland.

In other option -

Aizawl is the capital city of Mizoram, Gangtok is the capital city of Sikkim and Shillong is the capital city of Meghalaya.

Hence, "Kohima" is the correct answer.

100. Select the fraction from among the given options that can replace the question mark (?) in the following series.

$$\frac{3}{4}, \frac{7}{4}, \frac{5}{4}, \frac{9}{4}, ?$$

- a. $\frac{7}{4}$
- b. $\frac{9}{4}$
- c. $\frac{5}{4}$
- d. $\frac{13}{4}$

Ans. a

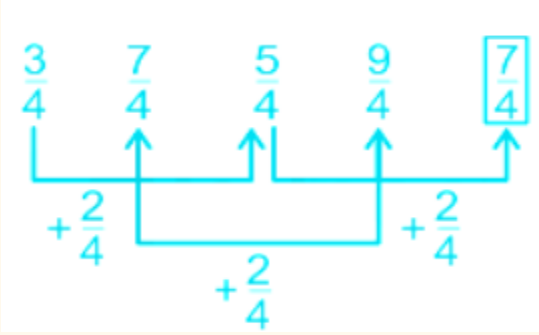
Explanation:

The logic followed here is:

There are 2 series:

$$\frac{3}{4}, \frac{5}{4}$$

$$\frac{7}{4}, \frac{9}{4}$$



Hence, "option 1" is the correct answer.