

Answers

1. Answer: d

Explanation:

The Kisan Sabha movement was an organised peasant movement against the zamindari system and the oppression of tenants by landlords.

It took organised shape in Bihar, where Swami Sahajanand Saraswati founded the Bihar Provincial Kisan Sabha in 1929.

The movement later spread across the country and led to the formation of the All India Kisan Sabha at Lucknow in 1936, with Sahajanand Saraswati as its first president.

Hence, **Bihar**.

2. Answer: c

Explanation:

'Nil Darpan' is a Bengali play that exposed the cruelty of British indigo planters towards the cultivators of Bengal.

It was written by Dinabandhu Mitra and published in 1860, around the time of the Indigo Revolt of 1859–60.

Its English translation was published by Reverend James Long, who was fined and jailed for it.

Hence, **Dinabandhu Mitra**.

3. Answer: c

Explanation:

The adrenal glands are endocrine glands located on top of each kidney, with an outer cortex and an inner medulla.

The adrenal cortex secretes corticosteroids, the main glucocorticoid being cortisol, which regulates metabolism and the stress response.

Thyroxine comes from the thyroid gland, estrogen mainly from the ovaries, and TSH from the pituitary gland.

Hence, **Cortisol**.

4. Answer: d

Explanation:

After independence on 15 August 1947, India retained the office of Governor-General until it became a republic on 26 January 1950.

Lord Mountbatten, the last Viceroy of British India, became the first Governor-General of independent India and served till June 1948.

He was succeeded by C. Rajagopalachari, the first and only Indian Governor-General.

Hence, **Lord Mountbatten**.

5. Answer: c

Explanation:

Article 1 of the Indian Constitution deals with the name and territory of the country.

It declares that India, that is Bharat, shall be a Union of States.

Dr. B.R. Ambedkar explained that the word 'Union' was preferred over 'Federation' because the Indian federation is not the result of an agreement among states, and no state has the right to secede from it.

Hence, **India, that is Bharat, shall be a Union of States.**

6. Answer: d

Explanation:

The High Court of Uttar Pradesh is the Allahabad High Court, one of the oldest High Courts in India.

It was established in 1866 at Agra and shifted to Allahabad in 1869, where its principal seat is located.

It also has a permanent bench at Lucknow, but the principal seat remains at Allahabad (now Prayagraj).

Hence, **Allahabad.**

7. Answer: b

Explanation:

The Pabna peasant revolt (1873–76) was an agrarian uprising against zamindars who raised rents illegally and evicted tenants.

It took place in the Pabna district of the Bengal Presidency, where peasants formed an Agrarian League at Yusufshahi pargana and resisted through legal means.

The movement contributed to the passing of the Bengal Tenancy Act of 1885; the Pabna region was part of historic Bengal.

Hence, **West Bengal**.

8. Answer: a

Explanation:

pH measures how acidic or basic a solution is on a scale of 0 to 14, where 7 is neutral.

Human blood is slightly alkaline, and its pH is normally kept within a narrow range of about 7.35 to 7.45 by buffer systems such as bicarbonate.

The average value is taken as 7.4; a fall below this range causes acidosis and a rise causes alkalosis.

Hence, **7.4**.

9. Answer: d

Explanation:

Ku Bon-chan of South Korea won the individual and team archery gold medals at the 2016 Rio Olympics.

Jean-Charles Valladont of France won the individual archery silver and Brady Ellison of the USA won the bronze at the same Games.

Andrea Arsovic is a Serbian sport shooter who competes in 10 m air rifle events, not in archery.

Hence, **Andrea Arsovic**.

10. Answer: b

Explanation:

SI prefixes are used to express very large or very small multiples of a unit as powers of 10.

The large prefixes run as exa (10^{18}), zetta (10^{21}) and yotta (10^{24}), while atto stands for the very small factor 10^{-18} .

So the multiple 10^{24} is denoted by the prefix yotta, with the symbol Y (the largest SI prefix as of 2018).

Hence, **Yotta**.

11. Answer: b

Explanation:

The President of India is elected for a term of five years and is eligible for re-election.

Dr. Rajendra Prasad, the first President, held office from 26 January 1950 to 13 May 1962, about 12 years, and is the only President elected twice.

V.V. Giri and N. Sanjiva Reddy served single terms, while Fakhruddin Ali Ahmed died in office in 1977.

Hence, **Dr. Rajendra Prasad**.

12. Answer: b

Explanation:

The Finance Commission is a constitutional body set up under Article 280 to recommend the sharing of tax revenue between the Centre and the states.

The 11th Finance Commission was constituted in 1998, covered the period 2000–2005, and was chaired by economist A.M. Khusro.

Later commissions were chaired by C. Rangarajan (12th), Vijay Kelkar (13th) and Y.V. Reddy (14th).

Hence, **A.M. Khusro**.

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13. Answer: b

Explanation:

'Amuktamalyada' is a Telugu epic poem about the marriage of the Tamil poet-saint Andal (Goda Devi) with Lord Ranganatha.

It was composed by Krishna Deva Raya, the greatest ruler of the Tuluva dynasty of the Vijayanagara Empire (1509–1529).

He was a great patron of literature, and his court had the eight poets known as the Ashtadiggajas.

Hence, Krishna Deva Raya.

14. Answer: a

Explanation:

Power is the rate at which work is done or energy is transferred.

It is calculated as $P = \frac{W}{t}$, where W is the work done and t is the time taken.

Its SI unit is the watt, where 1 watt = 1 joule per second.

Hence, **Work/Time**.

15. Answer: a

Explanation:

A false start occurs when an athlete leaves the starting blocks before the starting gun is fired.

It is a standard term in track events such as sprints and hurdles, and under current athletics rules a false start leads to disqualification.

The term is not part of the terminology of cricket, golf or football.

Hence, **Athletics**.

16. Answer: c

Explanation:

The Indian Constitution adopted the parliamentary system of government, modelled on the British Westminster system.

In this system the President is the nominal head, while real executive power lies with the Council of Ministers headed by the Prime Minister.

The Council of Ministers is collectively responsible to the Lok Sabha, which is the key feature of a parliamentary form of government.

Hence, **Parliamentary**.

17. Answer: a

Explanation:

Hippocrates was an ancient Greek physician of the 5th century BC who is regarded as the father of medicine.

He separated medicine from religion and superstition, treating disease as a result of natural causes, and is linked with the Hippocratic Oath taken by doctors.

Aristotle is known as the father of biology, Archimedes was a mathematician and physicist, and William Harvey described the circulation of blood.

Hence, **Hippocrates**.

18. Answer: d

Explanation:

The Red Fort in Delhi was built by the Mughal emperor Shah Jahan between 1638 and 1648 as the palace fort of his new capital, Shahjahanabad.

It gets its name from its massive red sandstone walls and is known in Hindi and Urdu as Lal Qila.

It was declared a UNESCO World Heritage Site in 2007, and the Prime Minister hoists the national flag here every Independence Day.

Hence, **Lal Qila**.

19. Answer: a

Explanation:

Mercury is the smallest planet of the solar system and the one closest to the Sun.

Its average distance from the Sun is about 57.91 million km, which is about 0.39 astronomical units.

Because of this short distance, it completes one revolution around the Sun in only about 88 days.

Hence, **57.91 million km**.

20. Answer: d

Explanation:

Gatka is a traditional Sikh martial art that uses wooden sticks (sotis), swords and shields to simulate combat.

It is associated with Punjab and is commonly performed during Sikh festivals and processions such as Nagar Kirtan and Hola Mohalla.

Other Indian martial arts include Thang-Ta of Manipur, Kalaripayattu of Kerala and Silambam of Tamil Nadu.

Hence, **Punjab**.

21. Answer: b

Explanation:

The electron was the first subatomic particle to be discovered.

In 1897, J.J. Thomson studied cathode rays in a discharge tube and showed that they were made of tiny negatively charged particles, much lighter than atoms.

He measured their charge-to-mass ratio, and these particles came to be called electrons; he later proposed the 'plum pudding' model of the atom.

Hence, **J.J. Thomson**.

22. Answer: a

Explanation:

Albania is a country in south-eastern Europe on the Balkan Peninsula, along the Adriatic and Ionian seas.

Its capital and largest city is Tirana, which has been the capital since 1920; the currency of Albania is the Lek.

Among the other names, Luanda is the capital of Angola and Hamilton is the capital of Bermuda, while Algeria is itself a country.

Hence, **Tirana**.

23. Answer: a

Explanation:

Article 80 of the Constitution provides for the composition of the Rajya Sabha, with a maximum strength of 250 members.

Out of these, the President nominates 12 members who have special knowledge or practical experience in literature, science, art and social service.

The remaining members are elected by the elected members of the State Legislative Assemblies and representatives of Union Territories.

Hence, **12**.

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24. Answer: a

Explanation:

A leaf in cross-section shows an upper epidermis, a lower epidermis and the ground tissue lying between them.

This ground tissue is the mesophyll, made of chloroplast-rich parenchyma cells and divided into palisade and spongy layers in dicot leaves.

It is the main site of photosynthesis; vascular bundles (veins) run through it, while stomata are pores in the epidermis and pith is found in stems and roots.

Hence, **Mesophyll**.

25. Answer: c

Explanation:

Finland is a Nordic country in northern Europe and a member of the European Union since 1995.

It replaced its earlier currency, the Finnish markka, and adopted the common European currency in 1999 (notes and coins from 2002).

Thus Finland uses the euro, unlike its Nordic neighbours Sweden, Norway and Denmark, which use their own krona/krone.

Hence, **Euro**.

26. Answer: b

Explanation:

India shares land borders with seven countries: Pakistan, Afghanistan, China, Nepal, Bhutan, Bangladesh and Myanmar.

China, Bhutan and Myanmar therefore all touch India's northern and north-eastern frontier.

Seychelles is an island nation in the western Indian Ocean, far from the Indian mainland, and shares no border with India.

Hence, **Seychelles**.

27. Answer: c

Explanation:

Maps are classified by the information they show, such as physical, political, thematic or general-purpose maps.

A topographic map is a large-scale general map that shows natural (physical) features like relief, rivers and forests along with cultural (man-made) features like roads, settlements and railways.

In India these maps are prepared by the Survey of India, using contour lines for relief and conventional signs for other features.

Hence, **Topographic map**.

28. Answer: c

Explanation:

Article 58 of the Constitution lays down the qualifications for election as President of India.

A candidate must be a citizen of India, must have completed 35 years of age, must be qualified for election as a member of the Lok Sabha and must not hold an office of profit.

The Constitution prescribes only a minimum age; there is no upper age limit for holding the office of President.

Hence, **No age limit has been fixed for it**.

29. Answer: c

Explanation:

After a general election, the Speaker of the outgoing Lok Sabha vacates office just before the first meeting of the newly elected House.

To conduct the oath of new members and the election of the new Speaker, a Speaker Pro-tem is appointed, usually the senior-most member of the House.

This temporary Speaker is appointed by the President of India, who also administers the oath to him or her.

Hence, **President of India**.

30. Answer: d

Explanation:

Schedules are lists attached to the Constitution that contain details such as allocation of seats, oaths, the Union, State and Concurrent Lists, and languages.

The original Constitution of 1950 had 8 Schedules; the 9th was added by the 1st Amendment (1951), the 10th and 11th by the 52nd (1985) and 73rd (1992) Amendments.

The 12th Schedule, dealing with urban local bodies (municipalities), was added by the 74th Amendment in 1992, taking the total to twelve.

Hence, **12**.

31. Answer: a

Explanation:

After the Emergency (1975–77) ended, the general election of 1977 resulted in the defeat of the Indian National Congress for the first time at the Centre.

The Janata Party formed the first non-Congress government at the national level.

Morarji Desai became Prime Minister on 24 March 1977 and led this government until July 1979, when he was succeeded by Charan Singh.

Hence, **Morarji Desai**.

32. Answer: c

Explanation:

The Indian Institute of Economics (IIE) is a research and training institution in the field of economics and management.

It was established in 1964 and is located in Hyderabad, Telangana.

It conducts research on economic policy, offers postgraduate programmes and publishes the Indian Journal of Economics and Business-related studies.

Hence, **Hyderabad**.

33. Answer: b

Explanation:

'Sunny Days' is the autobiography of former Indian cricket captain Sunil Gavaskar, published in 1976.

The title plays on his nickname 'Sunny' and describes his early life and cricketing career.

Gavaskar was the first batsman to score 10,000 Test runs and also wrote other books such as 'Idols', 'Runs 'n Ruins' and 'One Day Wonders'.

Hence, **Sunil Gavaskar**.

34. Answer: b

Explanation:

The Rajiv Gandhi Khel Ratna is India's highest sporting honour, instituted in 1991-92 by the Ministry of Youth Affairs and Sports.

It is given for the most outstanding performance by a sportsperson over a period of four years and carries a medallion, certificate and cash prize.

The very first award, for 1991-92, went to chess Grandmaster Viswanathan Anand, India's first Grandmaster.

Hence, **Viswanathan Anand**.

35. Answer: d

Explanation:

The Volga is the longest river in Europe, about 3,530 km long.

It rises in the Valdai Hills north-west of Moscow and flows through central and western Russia before draining into the Caspian Sea.

It is considered the national river of Russia, with cities such as Nizhny Novgorod, Kazan, Samara and Volgograd on its banks.

Hence, **Russia**.

36. Answer: c

Explanation:

Project Tiger is a centrally sponsored scheme of the Government of India to protect the Bengal tiger and its habitat.

It was launched on 1 April 1973, with Jim Corbett National Park in Uttarakhand being the first park covered, and initially included 9 tiger reserves.

Since 2006 it has been administered by the National Tiger Conservation Authority (NTCA) under the Ministry of Environment, Forest and Climate Change.

Hence, **1973**.

37. Answer: d

Explanation:

Ocean trenches are long, narrow and very deep depressions on the sea floor, formed where one tectonic plate subducts beneath another.

The Mariana Trench lies in the western Pacific Ocean, east of the Mariana Islands near Guam, where the Pacific Plate subducts beneath the Mariana Plate.

Its deepest point, the Challenger Deep, is about 10,994 m (nearly 11 km) deep, making it the deepest known point on Earth.

Hence, **Pacific Ocean**.

38. Answer: d

Explanation:

The Archaeological Survey of India (ASI) is the premier organisation for archaeological research and the protection of India's cultural heritage.

It was founded in 1861 by Alexander Cunningham, who also became its first Director-General, and is headquartered in New Delhi.

Today the ASI functions as an attached office of the Ministry of Culture and maintains over 3,600 centrally protected monuments.

Hence, **Ministry of Culture**.

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39. Answer: a

Explanation:

The atomic number of an element is the number of protons in the nucleus of its atom, which equals the number of electrons in a neutral atom.

Boron (symbol B) is a metalloid placed in Group 13 and Period 2 of the periodic table, just after beryllium.

Its atom has 5 protons, with the electronic configuration 2, 3, so its atomic number is

5.

Hence, 5.

40. Answer: c

Explanation:

The Indian National Congress was founded in 1885, with W.C. Bonnerjee as its first President, followed by Dadabhai Naoroji (1886) and Badruddin Tyabji (1887).

The fourth session was held at Allahabad in 1888 and was presided over by George Yule, a Scottish businessman of Calcutta.

He thus became the fourth President of the Congress and its first non-Indian (European) President.

Hence, **George Yule**.

41. Answer: c

Explanation:

Many sports have their own technical vocabulary for specific moves, holds and positions.

The 'Half Nelson' is a classic hold in which a wrestler passes one arm under the opponent's armpit and places the hand on the back of the opponent's neck.

It is used to control the opponent and turn him onto his back to score points or a pin; the 'Full Nelson' uses both arms and is banned in amateur wrestling.

Hence, **Wrestling**.

42. Answer: c

Explanation:

Adipic acid is a dicarboxylic acid with the formula $\text{HOOC}-(\text{CH}_2)_4-\text{COOH}$.

Its carbon chain has 6 carbon atoms in total (4 CH_2 groups plus 2 COOH carbons), so the parent alkane is hexane.

Since it has two $-\text{COOH}$ groups, the suffix '-dioic acid' is added to the parent name.

Adipic acid is an important industrial chemical, mainly used to make nylon-6,6.

Hence, **Hexanedioic acid**.

43. Answer: b

Explanation:

The Kaiga Generating Station is a nuclear power plant located at Kaiga in the Uttara Kannada district of Karnataka.

It is operated by the Nuclear Power Corporation of India Limited (NPCIL) and uses pressurised heavy water reactors (PHWRs).

Its first unit began commercial operation in 2000, and other major Indian nuclear plants include Tarapur, Rawatbhata, Kudankulam and Kalpakkam.

Hence, **Karnataka**.

44. Answer: a

Explanation:

Novak Djokovic is a Serbian professional tennis player and one of the most successful men's singles players in history.

He is popularly known by the nickname 'Nole', a common Serbian diminutive of Novak; he is also called 'Djoker'.

By the end of 2018 he had won 14 Grand Slam singles titles, including Wimbledon and the US Open in 2018.

Hence, **Nole**.

45. Answer: c

Explanation:

Arunachal Pradesh is the north-easternmost state of India and became a full state on 20 February 1987.

Its capital is Itanagar, located in the Papum Pare district at the foothills of the Himalayas.

Among the other places listed, Dispur is the capital of Assam, Amaravati of Andhra Pradesh and Gangtok of Sikkim.

Hence, **Itanagar**.

46. Answer: c

Explanation:

Tirupati dolls are traditional wooden toys and figurines crafted in the Tirupati region of Andhra Pradesh.

They are carved from red sandalwood (red sanders, *Pterocarpus santalinus*), a wood found mainly in the Seshachalam hills of Chittoor and Kadapa.

The craftsmen usually carve pairs of figures, such as a married couple or deities, and polish them to bring out the deep red colour of the wood.

Hence, **Red sandalwood**.

47. Answer: b**Explanation:**

The Zamindari Sabha, also known as the Landholders' Society, was one of the earliest political associations of modern India.

It was founded in Calcutta in 1838 by leading zamindars such as Dwarkanath Tagore, Prasanna Kumar Tagore and Radhakanta Deb.

Its aim was to protect the interests of landlords, and it later merged with the Bengal British India Society to form the British Indian Association in 1851.

Hence, **1838**.

48. Answer: d**Explanation:**

NITI Aayog is the policy think tank of the Government of India, set up on 1 January 2015 by a Union Cabinet resolution.

NITI stands for National Institution for Transforming India, and it replaced the Planning Commission that had existed since 1950.

The Prime Minister is its ex-officio Chairperson, and it promotes cooperative federalism by involving the states in policy-making.

Hence, **National Institution for Transforming India.**

49. Answer: c

Explanation:

Where a river meets the sea, its mouth may form a delta or a funnel-shaped tidal opening depending on tides and sediment load.

An estuary is the tidal mouth of a river where fresh river water mixes with salty sea water, producing brackish water.

Strong tides keep washing away the sediments, so no delta forms; the Narmada and Tapi rivers of India form estuaries rather than deltas.

A lagoon, by contrast, is a shallow water body separated from the sea by a sand bar.

Hence, **Estuary.**

50. Answer: b

Explanation:

When the government buys back its bonds before maturity at the full maturity value, it pays cash to bondholders and injects extra money into the economy.

The increase in money supply makes funds abundant and pushes interest rates down, so borrowing becomes cheaper.

Money available in the economy at such low interest rates is called cheap money; the opposite situation of scarce money and high interest rates is called dear money.

Hence, **Cheap money**.

51. Answer: d

Explanation:

Each term is obtained by multiplying the previous term by an increasing number and then adding an increasing number.

$$32 \times 1 + 2 = 34, 34 \times 2 + 3 = 71, 71 \times 3 + 4 = 217, 217 \times 4 + 5 = 873.$$

$$\text{So the next term} = 873 \times 5 + 6 = 4365 + 6 = 4371.$$

Hence, **4371**.

52. Answer: a

Explanation:

A is the brother of B, and B is the sister of C, so A, B and C are siblings.

M is the mother of C, and E is the daughter of C.

Thus E is the daughter of A's sibling C, and a male sibling of one's parent is one's uncle.

So A is E's uncle.

Hence, **Uncle**.

53. Answer: d

Explanation:

The statement says every person living in Madrid keeps a dog, and John lives in Madrid, so John definitely has a dog.

Conclusion i says John does not have a dog, which directly contradicts the statement, so it does not follow.

The statement says nothing about people living outside Madrid, so conclusion ii cannot be drawn either.

Thus neither conclusion i nor ii follows.

Hence, **D**.

54. Answer: d

Explanation:

The first pair links a branch of medicine with the body organ it studies.

Cardiology is the branch of medicine that deals with the heart and its disorders.

In the same way, dermatology is the branch of medicine that deals with the skin, hair and nails.

Hence, **Skin**.

55. Answer: c

Explanation:

In the three given parts, the thick diagonals together form a diamond around the centre, so the missing part needs a thick diagonal from its bottom-left to its top-right corner.

In each part a thin line runs from the outer corner only up to the middle of the square, so the missing part needs a short thin line from its bottom-right corner to its centre.

The small square drawn at the centre of the whole figure appears in the inner corner of each part, so the missing part must have a small square at its top-left corner.

Only one option satisfies all three conditions.

Hence, the square with a small square at its top-left corner, a thick diagonal from bottom-left to top-right and a short thin line from the bottom-right corner to the centre.

56. Answer: c

Explanation:

Piglet is the young one of a pig, cub of a lion (or bear), calf of a cow and lamb of a sheep.

Thus Piglet, Cub, Calf and Lamb are all names of young animals.

Lion is the name of an adult animal, not of a young one, so it does not belong to the group.

Hence, **Lion**.

57. Answer: c

Explanation:

To form a square, the chosen pieces must fit together with no gaps, and their outer edges must make four equal straight sides with right-angled corners.

The L-shaped piece 4 forms two outer sides of the square and leaves a notch in one corner.

Piece 3 fits into that notch, and the slanted edge of piece 3 matches the slanted end of strip 2, which then completes the remaining side.

The triangles 1 and 5 cannot fill the notch without leaving gaps, so pieces 2, 3 and 4 form the complete square.

Hence, **2,3,4**.

58. Answer: b

Explanation:

Compare letters only through a chain in which the inequality signs point the same way.

For P and Q: $P \geq U > R = S < T \leq Q$, the signs reverse at S, so no definite relation exists between P and Q and conclusion i does not follow.

For P and S: $P \geq U > R = S$ gives $P > S$, so conclusion ii ($P < S$) is false.

Hence neither conclusion i nor ii follows.

Hence, D.

59. Answer: c

Explanation:

Find the differences between consecutive terms of the series.

$272 - 271 = 1$, $276 - 272 = 4$, $285 - 276 = 9$, $301 - 285 = 16$, i.e. the differences are 1^2 , 2^2 , 3^2 , 4^2 .

The next difference is $5^2 = 25$, so the next term = $301 + 25 = 326$.

Hence, **326**.

60. Answer: c

Explanation:

From $A \geq B$ and $E = B$ we get $A \geq E$, so A is either equal to E or greater than E.

Conclusions i ($A = E$) and ii ($A > E$) are not individually certain, but together they

cover $A \geq E$, so either i or ii follows.

From $A > D$ and $C < D$ we get $A > D > C$, so $A > C$ and conclusion iii definitely follows.

Thus conclusion iii follows along with either i or ii.

Hence, **Only iii and either i or ii.**

61. Answer: d

Explanation:

When eight people face the centre of a round table, a person's right is anticlockwise and the person opposite is four seats away.

Taking Naila at a fixed seat, Anil is third to her right and Kriti is second to the right of Anil, which places Kriti third to the left of Naila; Anoop must be two seats from Naila, and since Vinod (opposite Anoop) cannot be next to Kriti, Anoop sits second to the left of Naila and Vinod sits opposite him.

Geeta then sits between Naila and Anoop, and Kajal cannot be next to Anil, so Kajal takes the seat on Naila's right and Pintu takes the remaining seat between Kriti and Anil.

Going clockwise the final order is: Naila, Geeta, Anoop, Kriti, Pintu, Anil, Vinod, Kajal (each person's left is the next person clockwise).

Seats four apart are opposite: Naila-Pintu, Geeta-Anil, Anoop-Vinod and Kriti-Kajal, so among the given pairs only Kriti and Kajal face each other.

Hence, **Kriti and Kajal.**

62. Answer: d

Explanation:

Purple appears in both views, and Red, White, Brown and Green all touch it, so Orange is opposite Purple and these four colours form a ring around Purple.

Reading each view in the same rotational sense around the Purple face, the first view gives Red followed by White, and the second view gives Brown followed by Green.

Joining these, the ring around Purple is Red, White, Brown, Green in order, so faces two steps apart in the ring are opposite: Red-Brown and White-Green.

Hence, **Brown**.

63. Answer: c

Explanation:

For people facing the centre, moving to a person's left means moving clockwise around the table.

Taking Naila at a fixed seat, Anil is third to her right and Kriti is second to the right of Anil, which places Kriti third to the left of Naila; Anoop must be two seats from Naila, and since Vinod (opposite Anoop) cannot be next to Kriti, Anoop sits second to the left of Naila and Vinod sits opposite him.

Geeta then sits between Naila and Anoop, and Kajal cannot be next to Anil, so Kajal takes the seat on Naila's right and Pintu takes the remaining seat between Kriti and Anil.

Going clockwise the final order is: Naila, Geeta, Anoop, Kriti, Pintu, Anil, Vinod, Kajal

(each person's left is the next person clockwise).

After the swaps the clockwise order becomes Anoop, Geeta, Naila, Kriti, Pintu, Kajal, Vinod, Anil; counting three seats clockwise from Pintu gives Kajal, Vinod and then Anil.

Hence, **Anil**.

64. Answer: b

Explanation:

Decode the expression one symbol at a time using the given meanings.

PQ means P is the brother of Q, $Q@R$ means Q is the mother of R, and RS means R is the brother of S.

So Q is the mother of both R and S, and P, being Q's brother, is the brother of S's mother.

A mother's brother is the maternal uncle.

Hence, **Maternal uncle**.

65. Answer: a

Explanation:

Check the differences between consecutive terms of the series.

$101 - 66 = 35$, $143 - 101 = 42$, $192 - 143 = 49$ and $248 - 192 = 56$, so the differences increase by 7 each time (multiples of 7).

The next difference is $56 + 7 = 63$, so the next term is $248 + 63 = 311$.

Hence, **311**.

66. Answer: c

Explanation:

A statement is definitely true when the passage states it directly, and definitely false when the passage contradicts it.

The passage says that rainfall and temperature are the main factors that determine the vegetation of any region.

The statement says temperature is an important factor in determining vegetation, which is exactly what the passage states, so the statement is definitely true.

Hence, **A**.

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67. Answer: d

Explanation:

Compare the alphabetical positions of the letters in the first pair.

S (19) becomes V (22) and M (13) becomes P (16), so each letter moves 3 places forward.

Applying the same shift, L (12) becomes O (15) and G (7) becomes J (10).

Hence, **OJ**.

68. Answer: d

Explanation:

Compare each letter of the word with its code letter.

M-N, E-V, A-Z, N-M, I-R, N-M and G-T are all opposite-letter pairs, i.e. the positions of each letter and its code add up to 27.

For OPPOSITE: O-L, P-K, P-K, O-L, S-H, I-R, T-G and E-V.

Hence, LKKLHRGV.

69. Answer: a

Explanation:

Track the # and the star separately through the five frames.

The # moves top-left, middle-left, bottom-left, bottom-middle, bottom-right, and the star moves bottom-right, middle-right, top-right, top-middle, top-left; both shift one step anticlockwise along the border each time.

One more anticlockwise step takes the # to the middle of the right side and the star to the middle of the left side.

Hence, the figure with the star at the middle of the left side and the # at the middle of the right side.

70. Answer: a

Explanation:

For people facing the centre, moving to a person's right means moving anticlockwise around the table.

Taking Naila at a fixed seat, Anil is third to her right and Kriti is second to the right of Anil, which places Kriti third to the left of Naila; Anoop must be two seats from Naila, and since Vinod (opposite Anoop) cannot be next to Kriti, Anoop sits second to the left of Naila and Vinod sits opposite him.

Geeta then sits between Naila and Anoop, and Kajal cannot be next to Anil, so Kajal takes the seat on Naila's right and Pintu takes the remaining seat between Kriti and Anil.

Going clockwise the final order is: Naila, Geeta, Anoop, Kriti, Pintu, Anil, Vinod, Kajal (each person's left is the next person clockwise).

Moving anticlockwise from Vinod we meet Anil, then Pintu, and then Kriti, so two people sit between them on Vinod's right side.

Hence, 2.

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71. Answer: d

Explanation:

First find how each letter is coded: I-R, N-M, R-I and E-V are opposite-letter pairs (positions add up to 27), while G becomes K by moving 4 places forward.

So the letters of GINGER code as G-K, I-R, N-M, G-K, E-V and R-I, giving the letters K, R, M, K, V and I.

Splitting GINGER into GIN and GER and writing each group's code starting from its second letter (I, N, G and E, R, G) gives RMK and VIK.

Hence, RMKVIK.

72. Answer: d

Explanation:

A statement is definitely false when it contradicts what the passage clearly says.

The passage says the hummock grasslands are grass-dominated, with trees and shrubs very scarce or absent, and that the pointed leaves belong to the various grasses.

The statement attributes the pointed leaves to trees and presents trees as part of these grasslands, which contradicts the passage.

Hence, D.

73. Answer: b

Explanation:

A diagonal drawn across a rectangle or square splits it into two right-angled triangles.

The left rectangle's diagonal gives 2 right triangles and the right rectangle's diagonal gives 2 more.

The small square in the right rectangle has its own diagonal, giving 2 more; the square inside the circle and the wavy middle strip form no triangles.

Total = $2 + 2 + 2 = 6$.

Hence, 6.

74. Answer: c

Explanation:

Only straight lines are counted; the circle around the figure is not a straight line.

The two diagonals inside the central square cross each other at the centre, so the crossing X is counted as 4 separate lines.

To these are added the top edge of the central square, the short vertical lines above and below the X on both sides, and the horizontal and end lines of the two arrow-shaped arms.

Counting all these straight lines together gives a total of 17.

Hence, 17.

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75. Answer: b

Explanation:

Classify each letter as a vowel or a consonant.

T, J, B and M are all consonants.

A is the only vowel among the five letters, so it does not belong to the group.

Hence, A.

76. Answer: b

Explanation:

A mirror placed beside a word reverses left and right but keeps top and bottom unchanged.

So the letter order is reversed to read L, E, A, R, S, I from left to right, and each letter is laterally inverted while staying upright.

Symmetric letters I and A look unchanged, while L, E, R and S appear flipped sideways; the figure with an upside-down A or a wrongly shaped R is not a mirror image, and an upside-down word is a water image.

Hence, the figure in which the word reads from right to left with every letter upright and laterally inverted, the R appearing as Я.

77. Answer: a

Explanation:

Break the statement into steps starting from the woman.

Her brother's wife's daughter is her brother's daughter, i.e. her niece.

The brother of that niece is her brother's son, and a brother's son is a nephew.

Hence, **Nephew**.

78. Answer: b

Explanation:

In the first pair, the second word is the name of the young one of the first animal: a young pig is called a piglet.

The young one of cattle such as a bull or cow is called a calf.

A lamb is a young sheep, a bunny a young rabbit and a cub a young lion or bear, so they do not fit.

Hence, **Calf**.

79. Answer: b

Explanation:

In an $n \times n$ grid the number of squares is the sum of squares $1^2 + 2^2 + \dots + n^2$; the slanting lines inside the cells create no new squares.

For the 3×3 grid: 9 small squares of size 1×1 , 4 squares of size 2×2 and 1 square of size 3×3 .

Total = $9 + 4 + 1 = 14$.

Hence, **14**.

80. Answer: b

Explanation:

Check the differences between consecutive terms.

$458 + 3 = 461$, $461 - 5 = 456$, $456 + 7 = 463$ and $463 - 11 = 452$, so consecutive prime numbers 3, 5, 7, 11 are added and subtracted alternately.

The next prime is 13 and it must be added: $452 + 13 = 465$.

Hence, **465**.

81. Answer: a

Explanation:

Check the gap between consecutive letters in each group using their alphabet positions.

DGJ: $D(4) + 3 G(7) + 3 J(10)$; MPS: $M(13) + 3 P(16) + 3 S(19)$; KNQ: $K(11) + 3 N(14) + 3 Q(17)$; LOR: $L(12) + 3 O(15) + 3 R(18)$.

RTV: $R(18) + 2 T(20) + 2 V(22)$, so its gap is 2 instead of 3.

Thus RTV is the only group that does not follow the common pattern.

Hence, **RTV**.

82. Answer: d

Explanation:

A water image is the reflection of an object in water, so the figure is flipped top-to-bottom while the left-to-right order of letters stays the same.

In BOARD, the letters B, O and D are symmetric about a horizontal axis, so they look unchanged in the water image.

The letters A and R are not symmetric about a horizontal axis, so they appear upside down, while the order B, O, A, R, D is kept.

Among the figures, only one keeps B, O and D unchanged, shows A and R inverted, and does not reverse the order or turn B or D sideways.

Hence, the figure in which B, O and D are unchanged and only A and R appear upside down.

83. Answer: a

Explanation:

Some teachers are writers, and all writers are readers, so those teachers who are writers are also readers.

Hence some teachers are readers, which converts to some readers are teachers, so conclusion i follows.

Since all writers are readers, it is certainly true that some writers are readers, so conclusion ii also follows.

Both conclusions follow, which matches statement E.

Hence, E.

84. Answer: b

Explanation:

In the first pair, the second number is the sum of the digits of the first number.

2136: $2 + 1 + 3 + 6 = 12$, which matches the given pair.

Applying the same rule to 4315: $4 + 3 + 1 + 5 = 13$.

So the missing number is 13.

Hence, 13.

85. Answer: a

Explanation:

Some cups are boxes and all boxes are games, so those cups are games; hence some games are cups and conclusion i follows.

All drugs are boxes and all boxes are games, so all drugs are games and conclusion ii follows.

All drugs are boxes, which converts to some boxes are drugs, so conclusion iii also follows.

Therefore every conclusion is valid.

Hence, All conclusions follow.

86. Answer: d

Explanation:

By the BODMAS rule, a chain of divisions is evaluated from left to right, and dividing by $\frac{1}{11}$ is the same as multiplying by 11.

$$\frac{1}{11} \div \frac{1}{11} = 1.$$

Then $1 \div \frac{1}{11} = 11$, $11 \div \frac{1}{11} = 121$ and $121 \div \frac{1}{11} = 1331$.

So the value of the expression is $11^3 = 1331$.

Hence, **1331**.

87. Answer: a

Explanation:

Let the cost price be ₹C; then profit = $2033 - C$ and loss = $C - 978$.

Given that the profit is 11% more than the loss: $2033 - C = 1.11(C - 978)$.

So $2033 - C = 1.11C - 1085.58$, which gives $2.11C = 3118.58$.

$C = 3118.58 \div 2.11 = 1478$.

Hence, **₹1478**.

88. Answer: c

Explanation:

The diagonal of a cube of side a is $a\sqrt{3}$, so $a\sqrt{3} = 9\sqrt{3}$ gives $a = 9$ cm.

Volume of the cube = $9^3 = 729 \text{ cm}^3$, and on melting the volume remains the same.

Volume of the cuboid = length $\times$ breadth $\times$ height = $9 \times 4.5 \times h = 40.5h$.

So $40.5h = 729$, giving $h = 18$ cm.

Hence, **18 cm**.

89. Answer: d

Explanation:

For the same distance d , the difference between the two travel times equals the total gap between being late and early.

Time difference = $5 + 4 = 9$ minutes = $9/60 = 3/20$ hour.

So $d/30 - d/36 = 3/20$, i.e., $d(6 - 5)/180 = 3/20$, which gives $d/180 = 3/20$.

$d = 180 \times 3/20 = 27$ km.

Hence, **27 km**.

90. Answer: a

Explanation:

Read the 2010 sales of the five branches from the bar graph: $C1 = 59$, $C2 = 87$, $C3 = 69$, $C4 = 51$ and $C5 = 89$ (in thousands).

Total sales in 2010 = $59 + 87 + 69 + 51 + 89 = 355$ thousand.

Average = total $\div$ number of branches = $355 \div 5 = 71$ thousand.

Hence, 71.

91. Answer: d

Explanation:

Read the sales of the required branches for both years from the bar graph (in thousands).

$$C1 = 59 + 69 = 128, C3 = 69 + 81 = 150 \text{ and } C5 = 89 + 47 = 136.$$

$$\text{Combined total} = 128 + 150 + 136 = 414 \text{ thousand.}$$

Hence, 414.

92. Answer: d

Explanation:

Use the laws of indices $(a^m)^n = a^{mn}$ and $\frac{a^m}{a^n} = a^{m-n}$.

$$(6^4)^2 = 6^8 \text{ and } 216^2 = (6^3)^2 = 6^6, \text{ so the bracket equals } \frac{6^8}{6^6} = 6^2 = 36.$$

$$\text{Then } 36 \times 6 + 16 = 216 + 16 = 232.$$

Hence, 232.

93. Answer: c

Explanation:

For a fixed distance, time is inversely proportional to speed.

If the speed becomes $\frac{8}{9}$ of the usual speed, the time becomes $\frac{9}{8}$ of the usual time T .

Extra time = $9T/8 - T = T/8 = 12$ minutes.

So $T = 12 \times 8 = 96$ minutes.

Hence, **96 minutes**.

94. Answer: b

Explanation:

Find each square root first, then apply BODMAS (division before addition).

$\sqrt{18.49} = 4.3$ since $4.3^2 = 18.49$, and $\sqrt{73.96} = 8.6$ since $8.6^2 = 73.96$.

$8.6 \div 2 = 4.3$, so the expression becomes $4.3 + 4.3 = 8.6$.

Hence, **8.6**.

95. Answer: c

Explanation:

The side of a square = $\sqrt{\text{area}}$, so the side of the glass = $\sqrt{676} = 26$ cm.

The glass is placed centrally with a 9 cm margin on each side of the table, so the margin is added on both ends.

Length of the table = $26 + 9 + 9 = 44$ cm.

Hence, **44 cm**.

96. Answer: b

Explanation:

Let the common value be k , so the shares are k , $k/2$, $k/3$ and $k/4$.

Total: $k(1 + 1/2 + 1/3 + 1/4) = 400$, i.e., $k \times 25/12 = 400$, so $k = 192$.

First child = 192 and second child = $192/2 = 96$.

Together they receive $192 + 96 = 288$ gifts.

Hence, **288**.

97. Answer: d

Explanation:

For successive percentage changes $a\%$ and $b\%$, the net change = $a + b + ab/100$.

Here $a = +5$ and $b = -5$, so net change = $5 - 5 + (5 \times -5)/100 = -0.25\%$.

Check: area becomes $1.05 \times 0.95 = 0.9975$ of the original, i.e., 0.25% less.

The negative sign shows a decrease in area.

Hence, **0.25% decrease**.

98. Answer: d

Explanation:

Total share given away = $13\% + 12\% + 14\% + 16\% = 55\%$ of the salary.

The remaining 45% of the salary = ₹29025, so salary = $29025 \times 100/45 = ₹64500$.

Donation to the orphanage = 12% of 64500 = ₹7740.

Hence, ₹7740.

99. Answer: a

Explanation:

Each trailing zero comes from a factor $10 = 2 \times 5$, and factors of 5 are fewer than factors of 2 in a factorial.

Number of 5s in $124!$ = $[124/5] + [124/25] + [124/125] = 24 + 4 + 0$.

So $124!$ has $24 + 4 = 28$ trailing zeros.

Hence, 28.

100. Answer: d

Explanation:

The circumference of a circle is $C = 2\pi r$, which is directly proportional to the radius.

If the radius becomes $8r$, the new circumference = $2\pi(8r) = 8 \times 2\pi r$.

So the new circumference is 8 times the circumference of the original circle.

Hence, 8.

101. Answer: c

Explanation:

From the bar graph, branch C2 sold 87 thousand books in 2010 and 80 thousand books in 2011.

So the total sales of C2 = $87 + 80 = 167$ thousand.

Branch C4 sold 51 thousand books in 2010 and 87 thousand books in 2011, so its total = $51 + 87 = 138$ thousand.

Required ratio = $167 : 138$, which cannot be simplified further.

Hence, **167:138**.

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102. Answer: b

Explanation:

The three sides of an equilateral triangle are equal, so the person covers equal distances at the three speeds.

For equal distances, average speed = $\frac{3}{\frac{1}{a} + \frac{1}{b} + \frac{1}{c}}$.

Here $\frac{1}{36} + \frac{1}{30} + \frac{1}{45} = \frac{5+6+4}{180} = \frac{15}{180} = \frac{1}{12}$.

So the average speed works out to $3 \times 12 = 36$ km/h, the harmonic mean of the three speeds.

Hence, **36 km/h**.

103. Answer: d

Explanation:

Let the numbers of ₹3, ₹4 and ₹5 coins be $7x$, $5x$ and $3x$.

Total value = $3(7x) + 4(5x) + 5(3x) = 21x + 20x + 15x = 56x$.

Given $56x = 392$, so $x = 7$.

Number of ₹3 coins = $7x = 7 \times 7 = 49$.

Hence, **49**.

104. Answer: b

Explanation:

For any two numbers, the product of the numbers equals the product of their LCM and HCF.

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

Substituting the given values, product = $55 \times 6 = 330$.

Hence, **330**.

105. Answer: c

Explanation:

Total calls per day by all employees = $(509 + 509) \times 59 = 1018 \times 59$.

Calls by the male workers = 509×59 .

Calls by the female workers = $1018 \times 59 - 509 \times 59 = 509 \times 59$.

So each female worker receives $(509 \times 59) \div 509 = 59$ calls per day.

Hence, 59.

106. Answer: c

Explanation:

Let the salaries of Wasim, Wilson and William be $7x$, $11x$ and $9x$.

William gets ₹120 more than Wasim, so $9x - 7x = 2x = 120$, giving $x = 60$.

Wilson's salary = $11x = 11 \times 60 = ₹660$.

Hence, 660.

107. Answer: d

Explanation:

Let the length of the train be L m; to cross the signboard it covers L m, and to cross the bridge it covers $(L + 408)$ m.

Since the speed is the same, $L/27 = (L + 408)/61$.

So $61L = 27L + 27 \times 408$, i.e. $34L = 11016$.

Therefore $L = 11016 \div 34 = 324$ m.

Hence, **324 m**.

108. Answer: b

Explanation:

Total weight of the 99 notebooks = $99 \times 9.9 = 980.1$ kg.

With the new average of the 100 notebooks being 10 kg, the new total weight = $100 \times 10 = 1000$ kg.

Weight of the new notebook = $1000 - 980.1 = 19.9$ kg.

Hence, **19.9 kg**.

109. Answer: a

Explanation:

Let the cost price be ₹100; the marked price is then $100 + 34\% \text{ of } 100 = ₹134$.

After a 34% discount, selling price = $134 \times 66/100 = ₹88.44$.

Loss = $100 - 88.44 = ₹11.56$ on a cost of ₹100, i.e. a loss of 11.56%.

Shortcut: equal markup and discount of $x\%$ always give a loss of $\frac{x^2}{100}\% = \frac{34^2}{100}\% = 11.56\%$.

Hence, 11.56%.

110. Answer: d

Explanation:

$$\text{Cost price} = \text{selling price} \times \frac{100}{100 + \text{profit}\%}.$$

$$\text{So CP} = 729 \times \frac{100}{112.5} = 729 \times \frac{8}{9} = ₹648.$$

$$\text{Half of the cost price} = 648 \div 2 = ₹324.$$

Hence, ₹324.

111. Answer: b

Explanation:

$$\text{Simple interest} = \frac{P \times R \times T}{100} = \frac{5200 \times 8 \times 5}{100} = ₹2080.$$

$$\text{Amount after 5 years} = 5200 + 2080 = ₹7280.$$

$$\text{Half of it is invested in shares, so the remaining amount} = 7280 \div 2 = ₹3640.$$

Hence, 3640.

112. Answer: d

Explanation:

For 2 years, $CI - SI = P \left(\frac{R}{100} \right)^2$.

So $40 = P \times \left(\frac{4}{100} \right)^2 = P \times \frac{16}{10000}$.

Therefore $P = \frac{40 \times 10000}{16} = ₹25000$.

Hence, **25000**.

113. Answer: c**Explanation:**

If 11% of the bulbs are defective, the good bulbs form $100\% - 11\% = 89\%$ of the total.

So 89% of total = 5785, giving total = $5785 \times 100/89 = 6500$.

Defective bulbs = $6500 - 5785 = 715$ (or 11% of $6500 = 715$).

Hence, **715**.

114. Answer: d**Explanation:**

Let the number be $N = 64k + 31$ for some whole number k .

Since 64 is a multiple of 32, the term $64k$ leaves remainder 0 when divided by 32.

So the remainder depends only on 31, and 31 is less than 32, so the remainder is 31.

Hence, 31.

115. **Answer: d**

Explanation:

Total weight of the first 4 bangles = $4 \times 35 = 140$ gm.

Total weight of the remaining 6 bangles = $6 \times 36 = 216$ gm.

Overall average = $(140 + 216) \div 10 = 356 \div 10 = 35.6$ gm.

Hence, 35.6.

116. **Answer: a**

Explanation:

The mobiles can be shared equally only if the number of students is a factor of 648, so we count the factors of 648.

Prime factorisation: $648 = 2^3 \times 3^4$.

Number of factors = $(3 + 1)(4 + 1) = 4 \times 5 = 20$.

So there are 20 ways of distributing the mobiles equally.

Hence, 20.

117. Answer: c

Explanation:

Total marks obtained = $56 + 86 + 42 + 35 = 219$.

Maximum marks = $80 + 100 + 70 + 50 = 300$.

Overall percentage = $(219 \div 300) \times 100 = 73\%$.

Hence, **73%**.

118. Answer: d

Explanation:

Under compound interest the sum multiplies by the same factor in each equal time period; here it doubles every 3 years.

Since $64 = 2^6$, the sum has to double 6 times.

Required time = $6 \times 3 = 18$ years.

Hence, **18**.

119. Answer: d

Explanation:

Apply BODMAS: evaluate powers and roots first, then division, then addition and subtraction.

$$6 \div 6^{-2} = 6^{1-(-2)} = 6^3 = 216, \sqrt{36} = 6 \text{ and } \sqrt{144} = 12.$$

So the expression = $216 + 6 - 12 = 210$.

Hence, **210**.

120. Answer: a

Explanation:

For the same distance, speed is inversely proportional to time.

So the ratio of speeds is the reciprocal of the ratio of times.

Times are 13 : 19, so speeds of Dinesh and Edwin = $1/13 : 1/19 = 19 : 13$.

Hence, **19:13**.

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