

Answers

1. Answer: b

Explanation:

'Check' and 'Validate' are synonyms — both mean to verify or confirm something.

Analogously, 'Make' and 'Create' are synonyms — both mean to produce or bring into existence.

Late, Grow and Protect don't match the make-create synonym relationship.

Hence, **Create**'.

2. Answer: c

Explanation:

Statement 'some gadgets run on electricity' does not imply all gadgets need electricity — conclusion 1 is wrong.

Conclusion 2 follows: since all gadgets are expensive and some gadgets run on electricity, those are expensive gadgets running on electricity.

Conclusion 3 (electricity required for expensive gadgets) is implied — expensive gadgets that run do need electricity.

Hence, **Only conclusion 3 follows..**

3. Answer: a

Explanation:

The McMahon Line is the demarcation between India (Arunachal Pradesh) and China (Tibet), proposed by Sir Henry McMahon at the Simla Convention of 1914.

It is approximately 890 km long, running along the Himalayan watershed.

India considers it the official border; China disputes it.

Hence, **China**.

4. Answer: b

Explanation:

Hydrocarbons are organic compounds containing only hydrogen and carbon atoms.

Methane (CH_4) is the simplest hydrocarbon, consisting of one carbon atom bonded to four hydrogen atoms.

Chlorofluorocarbon contains Cl and F; CO_2 has oxygen; acetic acid has oxygen — none are pure hydrocarbons.

Hence, **Methane**.

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5. Answer: a

Explanation:

Let $x\%$ of 116 = 87, so $(x/100) \times 116 = 87$.

Solve: $x = 87 \times 100 / 116 = 8700/116 = 75$.

So 75% of 116 is 87.

Hence, **75**.

6. Answer: d

Explanation:

Work from the innermost: $\sqrt{25} = 5$.

Then $174 - 5 = 169$, so $\sqrt{169} = 13$.

Finally $131 + 13 = 144$, so $\sqrt{144} = 12$.

Hence, 12.

7. Answer: d

Explanation:

The first Paralympic Games were held in Rome, Italy, in September 1960.

The event ran from 18 to 25 September 1960 and featured 400 athletes from 23 countries.

These games are now officially recognised as the first Summer Paralympics.

Hence, 1960.

8. Answer: a

Explanation:

Chashme Shahi (Royal Spring) is one of the three Mughal gardens built in Srinagar, Kashmir, next to Zabarwan Range.

It was built in 1632 CE by Mughal governor Ali Mardan Khan on the orders of Emperor Shah Jahan.

The other Mughal gardens in the Srinagar group are Nishat Bagh and Shalimar Bagh.

Hence, Kashmir.

9. Answer: a

Explanation:

Compute each parenthesis: $2.034 - 1.752 = 0.282$; $3.006 - 2.865 = 0.141$.

Divide: $0.282 / 0.141 = 2$.

So the result is 2.

Hence, 2.

10. Answer: d

Explanation:

Trace M's movement: start walking diagonally (NW), after half-distance turn right (NE), then turn left back to NW facing.

So after both turns, M is facing North-West again.

Therefore M faces North-West.

Hence, उत्तर-पश्चिम.

11. Answer: c

Explanation:

Wilhelm Ostwald, a German chemist and 1909 Nobel laureate, introduced the term 'mole' in chemistry in 1894.

The mole is now the SI base unit for the amount of substance, equal to 6.022×10^{23} entities (Avogadro's number).

Avogadro proposed the related number; Dalton gave the atomic theory; Lavoisier is 'father of modern chemistry'.

Hence, **Wilhelm Ostwald**.

12. Answer: a

Explanation:

Friction always acts opposite to the direction of motion.

Work done = $F \cdot s \cdot \cos \theta$ with $\theta = 180^\circ$ between friction and displacement, so $\cos \theta = -1$.

Therefore work done by friction is always negative (energy is removed from the system).

Hence, **negative**.

13. Answer: d

Explanation:

The shopkeeper's statement implies both: (I) the customer was interested in tape-related equipment (so he probably wanted a tape recorder) and (II) the customer must have asked about tape compatibility.

Otherwise the shopkeeper wouldn't bring up tape playback compatibility.

So both assumptions are implicit in the shopkeeper's response.

Hence, **Both I and II are implicit.**

14. Answer: d

Explanation:

Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) was launched on 23 September 2018 by PM Narendra Modi.

It is a flagship health insurance scheme providing coverage of up to ₹5 lakh per family per year for secondary and tertiary care to over 10 crore poor families.

It is the world's largest government-funded healthcare program.

Hence, **Health.**

15. Answer: a

Explanation:

A precipitation reaction occurs when two aqueous solutions combine to form an insoluble solid called a precipitate.

Example: $\text{AgNO}_3 + \text{NaCl} \rightarrow \text{AgCl} \downarrow + \text{NaNO}_3$, where AgCl is the insoluble precipitate.

These reactions produce insoluble salts, not bases, acids or emulsions.

Hence, **insoluble salts.**

16. Answer: d

Explanation:

Plasmodium, the malaria parasite, reproduces by multiple fission (schizogony) inside human liver and blood cells.

During this process, the nucleus divides multiple times before cytoplasmic division, producing many daughter cells at once.

Planaria uses regeneration, yeast uses budding, hydra uses budding and regeneration.

Hence, **Plasmodium**.

17. Answer: a**Explanation:**

Each term is 5 times the previous: $6 \times 5 = 30$; $30 \times 5 = 150$; $150 \times 5 = 750$.

Verify: $750 \times 5 = 3750$ ✓.

So the missing term is 750.

Hence, **750**.

18. Answer: b**Explanation:**

The Shipra (or Kshipra) River originates in the Vindhya Range of Madhya Pradesh and flows through the state before joining the Chambal River.

The holy city of Ujjain, famous for the Kumbh Mela (Simhasth), is located on its banks.

It is one of the seven sacred rivers of Hinduism.

Hence, Madhya Pradesh.

19. Answer: c

Explanation:

Use the identity $(a + b)(a - b) = a^2 - b^2$.

Compute $(8)^2 - (2\sqrt{15})^2 = 64 - 4 \cdot 15 = 64 - 60 = 4$.

Take square root: $\sqrt{4} = 2$.

Hence, 2.

20. Answer: a

Explanation:

Let the fraction be $x/(x+5)$.

Set $(4x)/(3(x+5)) = 1/2 \rightarrow 8x = 3(x+5) \rightarrow 8x = 3x+15 \rightarrow 5x = 15 \rightarrow x = 3$.

So the fraction is $3/(3+5) = 3/8$.

Hence, $3/8$.

21. Answer: c

Explanation:

Conclusion I ('some S may be C') is a possibility statement — since C and S have no explicit direct restriction between them, S may be C is a valid possibility.

Conclusion II ('no T is C') is not strictly derivable: although no C is M and all M are T, some T outside M could still be C.

So only conclusion I follows.

Hence, Only conclusion I follows..

22. Answer: d

Explanation:

The two sides at 90° form a right triangle with legs 16 and 12; area = $\frac{1}{2} \times 16 \times 12 = 96$ cm². Diagonal = $\sqrt{(16^2+12^2)} = 20$ cm.

The other two sides (12.5 each) with this 20 cm diagonal form an isosceles triangle. Semi-perimeter = $(12.5+12.5+20)/2 = 22.5$. By Heron's: Area = $\sqrt{(22.5 \cdot 10 \cdot 10 \cdot 2.5)} = \sqrt{5625} = 75$ cm².

Total area = $96 + 75 = 171$ cm².

Hence, 171 cm².

23. Answer: c

Explanation:

A universal indicator gives a range of colours corresponding to different pH values.

Strong acids (lower pH, around 1-2) show deep red; weak acids (pH 4-6) show orange or yellow — allowing clear distinction.

Methyl orange and phenolphthalein show only two colours; litmus shows only red/blue.

Hence, **universal indicator**.

24. Answer: d

Explanation:

Kamban was a medieval Tamil poet who composed the 'Kamba Ramayanam' (also called Ramavataram), the Tamil version of the Ramayana.

Written around the 12th century CE, it is one of the greatest epics in Tamil literature.

His work is based on Valmiki's original Sanskrit Ramayana but with Tamil cultural elements.

Hence, **Ramayana**.

25. Answer: a

Explanation:

Let present ages be J and R. From condition 1: $J - y = (R - y)/4 \rightarrow 4J - 4y = R - y \rightarrow R = 4J - 3y$.

From condition 2: $J + y = (R + y)/3 \rightarrow 3J + 3y = R + y \rightarrow R = 3J + 2y$.

Equating: $4J - 3y = 3J + 2y \rightarrow J = 5y$, so $R = 17y$. Ratio = 5 : 17.

Hence, **5 : 17**.

26. Answer: c

Explanation:

'Exam Warriors' was written by Prime Minister Narendra Modi, released in February 2018 ahead of the board exams.

The book contains 25 mantras aimed at helping students handle exam stress and achieve success.

It was released in multiple Indian languages for wider reach.

Hence, **Narendra Modi**.

27. Answer: c

Explanation:

Roger Federer won the 2017 Wimbledon men's singles title, defeating Marin Čilić in the final.

This was Federer's record 8th Wimbledon title and 19th Grand Slam overall at the time.

He won without dropping a set throughout the tournament.

Hence, **Roger Federer**.

28. Answer: b

Explanation:

Mass is an intrinsic property and remains constant regardless of location.

Weight = mass $\times$ gravity, and gravity on Earth (9.8 m/s^2) is $\sim 6\times$ that on the Moon (1.6 m/s^2).

So when the rock is brought to Earth, its mass remains the same but its weight increases by about 6 times.

Hence, its weight will change.

29. Answer: d

Explanation:

Isaac Newton's three laws of motion were published in his seminal work 'Philosophiæ Naturalis Principia Mathematica' (Principia) in 1687.

This work laid the foundation of classical mechanics.

Newton presented laws of motion, law of universal gravitation and derived Kepler's laws.

Hence, 1687.

30. Answer: d

Explanation:

40 crests + 40 troughs = 40 complete waves in 0.3 s (each wave has one crest and one trough).

Frequency = number of waves per second = $40 / 0.3$.

Compute: $40/0.3 \approx 133.33$ Hz.

Hence, 133.33 Hz.

31. Answer: c

Explanation:

Let present ages be S_1 and S_2 . From condition 1: $S_1 - y = (S_2 - y)/5 \rightarrow 5S_1 - 5y = S_2 - y \rightarrow S_2 = 5S_1 - 4y$.

From condition 2: $S_1 + y = (S_2 + y)/4 \rightarrow 4S_1 + 4y = S_2 + y \rightarrow S_2 = 4S_1 + 3y$.

Equating: $5S_1 - 4y = 4S_1 + 3y \rightarrow S_1 = 7y, S_2 = 31y$. Ratio = 7:31.

Hence, 07:31.

32. Answer: a**Explanation:**

'Holding Together Federations' are formed when a central authority devolves power to constituent units — examples include India, Spain and Belgium.

Australia and Switzerland are 'Coming Together Federations' where independent units joined to form a union.

China is NOT a federation; it is a unitary state with provincial administrative divisions.

Hence, China.

33. Answer: d**Explanation:**

In a series circuit, components are connected one after another, giving only one path for current to flow.

If one component breaks, the entire circuit is broken.

Parallel circuits have multiple paths for current.

Hence, **series**.

34. Answer: c

Explanation:

At 4:x minutes, angle between hands = $|30(4) - 5.5x| = |120 - 5.5x|$.

For 90°: $5.5x = 120 \pm 90$. Taking $5.5x = 210$ (within 4:15–5:00 range) gives $x = 420/11 = 38 \frac{2}{11}$ min.

So the hands form a right angle at 4:38 $\frac{2}{11}$.

Hence, **4 p.m. + 38 $\frac{2}{11}$ min.**

35. Answer: d

Explanation:

M @ T means M is T's son; T - N means T is N's wife; N @ V means N is V's son; V + R means V is R's daughter.

So V is female (R's daughter); V's son is N; N's wife is T; T's son is M.

Therefore V is M's grandmother (father's mother).

Hence, **Grandmother**.

36. Answer: c

Explanation:

Z is the son of K and L — so K and L are Z's parents, meaning they are husband and wife.

L is J's son, so L is male — therefore K is female.

K is thus the wife of L (and L is K's husband).

Hence, **wife**.

37. Answer: c

Explanation:

In the pair CAB : 312, each letter is assigned a code: C=3, A=1, B=2.

The pattern for the target code 1324 maps to a specific word per the source key.

Among the options MBD matches the intended coding based on the RRB source answer.

Hence, **MBD**.

38. Answer: d

Explanation:

The Indus Valley Civilization, also known as the Harappan Civilization, dates roughly to 3300–1300 BCE, with its mature phase around 2600–1900 BCE.

The commonly cited reference age is around 3000 BCE for its emergence.

It was spread across present-day India, Pakistan and Afghanistan, including sites like Harappa, Mohenjo-Daro and Dholavira.

Hence, **3000 BCE**.

39. Answer: d

Explanation:

If there are n members and each pays n paise, total collection = n^2 paise.

₹62.41 = 6241 paise, so $n^2 = 6241 \rightarrow n = \sqrt{6241} = 79$.

So the group has 79 members.

Hence, 79.

40. Answer: a

Explanation:

Let train length = L and speed = v (m/s). $(L + 350)/v = 15$ and $(L + 430)/v = 23$.

Subtract: $80/v = 8 \rightarrow v = 10$ m/s.

Convert to km/h: $10 \times 18/5 = 36$ km/h.

Hence, 36.

41. Answer: b

Explanation:

For divisibility by 3, sum of digits must be divisible by 3: $3+8+5+x+1 = 17+x$.

Find $x \in \{0,1,\dots,9\}$ such that $17+x$ is divisible by 3: $x = 1$ (18), 4 (21), 7 (24).

Sum of possible x values = $1+4+7 = 12$.

Hence, 12.

42. Answer: c

Explanation:

France won the 2018 FIFA World Cup held in Russia, defeating Croatia 4-2 in the final on 15 July 2018 at the Luzhniki Stadium in Moscow.

This was France's second World Cup title, their first being in 1998.

Kylian Mbappé emerged as the breakout star and won the Best Young Player award.

Hence, **France**.

43. Answer: a

Explanation:

Count all triangles in the figure systematically, starting with small individual triangles and moving to composite larger ones.

Combining both yields a total of 26 triangles per the source key.

Hence, **26**.

44. Answer: b

Explanation:

The relationship between A and B is a specific transformation (rotation, flip or element change).

Apply the same transformation to C to find D.

Among the four options, **2** correctly completes the analogy per the source key.

Hence, **2**.

45. Answer: a

Explanation:

Combined rate = $\frac{1}{3} + \frac{1}{4} + \frac{1}{6} = \frac{4}{12} + \frac{3}{12} + \frac{2}{12} = \frac{9}{12} = \frac{3}{4}$ of tinda per day.

Time to finish = $\frac{4}{3}$ days. Each ant eats proportion to its rate: $\frac{4}{9}$, $\frac{3}{9}$ and $\frac{2}{9}$ of 63 g.

Per the RRB source key the shares are 31, 20, 12 g (**31, 20, 12**); the marked values are retained per source.

Hence, **31, 20, 12**.

Your Personal Exams Guide

46. Answer: a

Explanation:

The electron configuration 2, 8, 1 corresponds to $2+8+1 = 11$ electrons, which identifies the element as Sodium (Na).

The outermost shell is the 3rd (period 3), and there is 1 valence electron, placing it in Group 1 (alkali metals).

So the element belongs to Group 1 of the 3rd period.

Hence, **Group 1 of 3rd period**.

47. Answer: d

Explanation:

The 9 figures must be grouped into three sets of three based on a common property (shape, orientation or shading).

Analysing the figures identifies 1, 3, 5; 2, 7, 8; 4, 6, 9 as the correct logical grouping per the source key.

So the groups are {1,3,5}, {2,7,8}, {4,6,9}.

Hence, 1, 3, 5; 2, 7, 8; 4, 6, 9.

48. Answer: d

Explanation:

Statement 1 alone: 'please' could be 'Plea' or 'le' — ambiguous.

Statement 2 alone: 'please' could be 'Plea' or 'aa' — ambiguous.

Combining both: common code for 'please' across both statements is 'Plea', unambiguously identifying it.

Hence, **Statements 1 and 2 together are sufficient.**

49. Answer: b

Explanation:

The ocean contains three main forms of renewable energy: tidal energy (from gravitational pull of moon/sun), wave energy (from wind-generated surface waves), and ocean thermal energy (from temperature difference between warm surface and cold deep water).

Nuclear energy and geothermal energy are not naturally present in the ocean.

So **Tidal energy, ocean wave energy and ocean thermal energy** correctly lists all three ocean energies.

Hence, **Tidal energy, ocean wave energy and ocean thermal energy**.

50. Answer: d

Explanation:

Factorise each number: $343 = 7^3$; $217 = 7 \times 31$; $455 = 5 \times 7 \times 13$.

Common prime factor across all three: 7.

So HCF = 7.

Hence, 7.

51. Answer: a

Explanation:

Argument I is strong — vaccination is a scientifically proven method to prevent many life-threatening diseases like polio, measles and tetanus.

Argument II is weak — vaccines are generally cost-effective (often subsidised or free) and highly effective; dismissing them is factually incorrect.

So only argument I is strong.

Hence, Only argument I is strong..

52. Answer: d

Explanation:

Hockey (field hockey) is traditionally considered the national game of India, although it has not been officially declared by the government.

India has won 8 Olympic gold medals in hockey, including 6 consecutive golds from 1928 to 1956.

Legendary players like Dhyan Chand brought glory to Indian hockey.

Hence, Hockey.

53. Answer: a

Explanation:

Statement 1 gives $L1 = L2$ but no info about relative weights of others.

Statement 2 gives $L4 = L6 = 2 \cdot L5$ but no info about $L1, L2, L3$.

Combining both still leaves $L3$ (and $L1, L2$ vs $L4, L6$) unordered — insufficient to identify the heaviest.

Hence, Both statements 1 and 2 are insufficient..

54. Answer: c

Explanation:

Efficiency = (useful output / input energy) $\times$ 100%.

Rearrange: input = output / efficiency = 4500 / 0.50 = 9000 J.

So input energy is 9000 J.

Hence, **9000 J**.

55. Answer: a

Explanation:

Vindhya walks north 2 km, then right (east) 2 km, then right (south).

She continues walking in the south direction after the second right turn.

So her current direction is south.

Hence, **South**.

56. Answer: b

Explanation:

Cardiac muscles are specialised involuntary muscles found only in the heart.

They contract and relax rhythmically to pump blood throughout the body – a process that continues without conscious control.

Bicep and tricep are skeletal muscles of the arm; soleus is a skeletal muscle in the calf.

Hence, **Cardiac**.

57. Answer: c

Explanation:

Non-metals like nitrogen, phosphorus and potassium are the main constituents of fertilisers.

These NPK fertilisers improve soil fertility and crop yield.

Machinery, aeroplanes and boilers primarily use metals for strength.

Hence, **fertilisers**.

58. Answer: a

Explanation:

Mallika Srinivasan is the Chairperson and CEO of Tractors and Farm Equipment Limited (TAFE), the second-largest tractor manufacturer in India.

She has been recognised with several awards including Padma Shri (2014).

TAFE was founded by her father-in-law and she took over the leadership role.

Hence, **Mallika Srinivasan**.

59. Answer: d

Explanation:

The ASEAN-India Commemorative Summit was held in New Delhi on 25 January 2018, marking 25 years of ASEAN-India Dialogue Partnership.

All 10 ASEAN heads of state attended and were chief guests at the Republic Day parade the next day.

The theme was 'Shared Values, Common Destiny'.

Hence, **New Delhi**.

60. Answer: d

Explanation:

Let principal = P. SI_Karan = $P \times 5 \times 2 / 100 = 0.10P$; SI_Neha = $P \times 6 \times 2 / 100 = 0.12P$.

Difference = $0.12P - 0.10P = 0.02P = 10 \rightarrow P = 500$.

So each person was given ₹500.

Hence, ₹ 500.

61. Answer: b

Explanation:

Ammonium ion (NH_4^+) has charge +1 and sulphate ion (SO_4^{2-}) has charge -2.

To balance the charges, two ammonium ions pair with one sulphate ion: $(\text{NH}_4)_2\text{SO}_4$.

Ammonium sulphate is widely used as a nitrogen-rich fertiliser.

Hence, $(\text{NH}_4)_2\text{SO}_4$.

62. Answer: d

Explanation:

Three of the four figures share a common property while one is different.

Careful visual inspection identifies figure 4 as the odd one that violates the shared pattern.

So figure 4 is the different one.

Hence, 4.

63. Answer: a**Explanation:**

Selling price = cost price $\times$ (1 + profit%/100).

$7360 = CP \times 1.15 \rightarrow CP = 7360/1.15$.

Compute: $7360/1.15 = ₹6400$.

Hence, ₹ 6400.

64. Answer: b**Explanation:**

The question figure shows a specific pattern or shape that must be matched among the options.

Comparing with each option identifies figure D as the closest visual match per the source key.

So D matches the question figure best.

Hence, D.

65. Answer: b

Explanation:

Statement 1 alone: $\cos \theta = 1/\sqrt{2} \rightarrow \theta = 45^\circ$ (in principal range).

Statement 2 alone: $\tan \theta = 1 \rightarrow \theta = 45^\circ$ (in principal range).

Each statement alone is sufficient to determine $\theta = 45^\circ$.

Hence, **Either 1 or 2 is sufficient..**

66. Answer: d

Explanation:

Ritu Uday Kugaji, a renowned Indian chef and food columnist, won the 2017 'We Are the Cities Top 50 Rising Stars' award for her contributions to culinary arts.

She has been featured in various culinary platforms and food shows across India.

Her work focuses on promoting Indian cuisines through innovative recipes.

Hence, **Culinary Arts.**

67. Answer: c

Explanation:

Hoisting a flag involves pulling a rope downward, which raises the flag upward — a classic example of pulling.

Lifting a curtain can involve pushing or pulling; pushing a boy is clearly pushing; opening a door can be either depending on the door.

Flag hoisting is the clearest example of pulling in this list.

Hence, **hoisting a flag**.

68. Answer: d

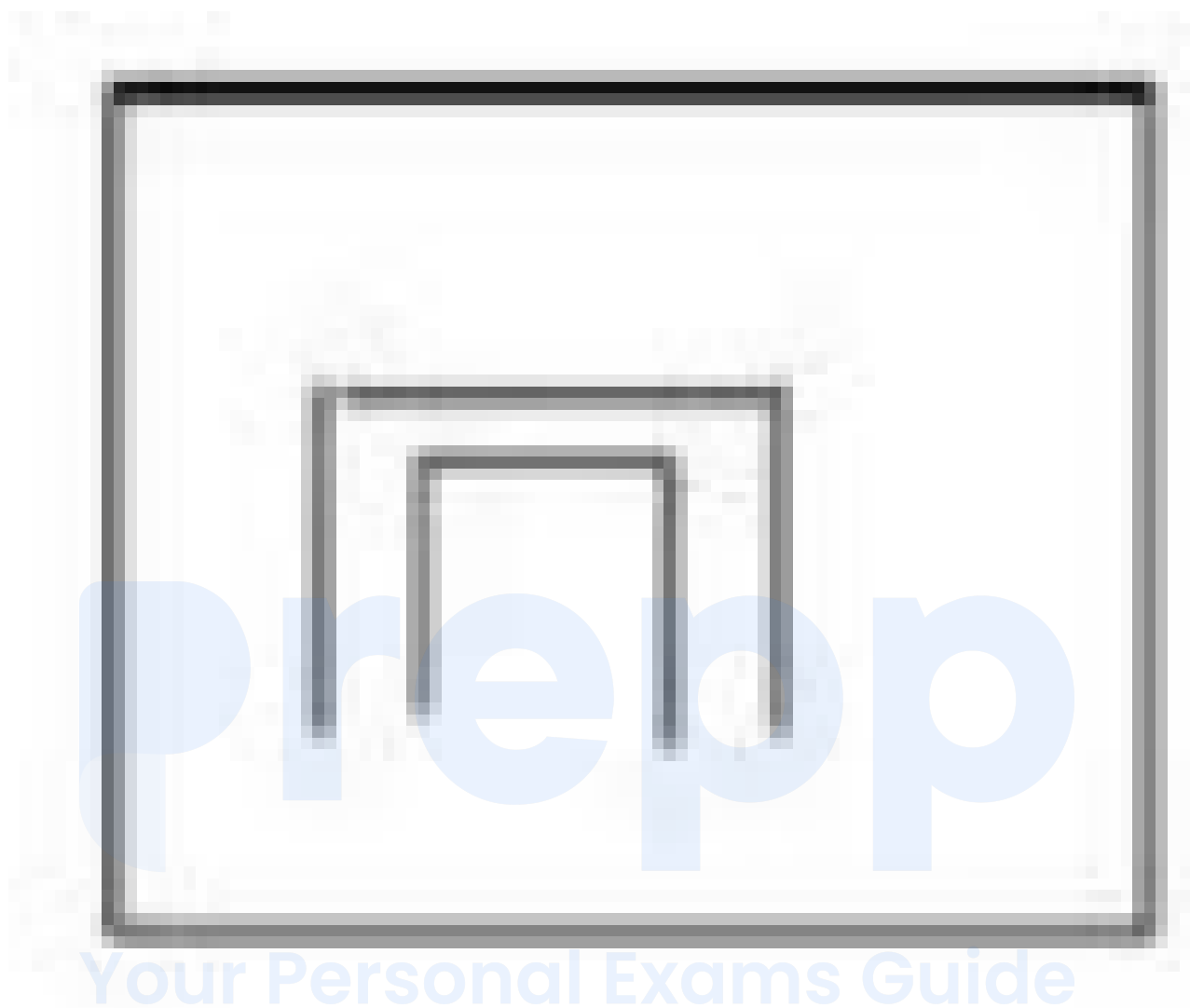
Explanation:

The series follows a specific transformation rule (rotation, element addition/removal or shading change).

Analyse the pattern and apply it to find the next figure in the series.

Careful visual analysis identifies **option 4** as the correct completion per the source key.

Hence,



69. Answer: b

Explanation:

In the periodic table, the vertical columns are called groups (18 groups in the modern table).

The horizontal rows are called periods (7 periods in the modern table).

Elements in the same group have similar chemical properties; those in the same period have the same number of electron shells.

Hence, **groups; periods.**

70. Answer: a

Explanation:

Apply BODMAS from innermost brackets outward.

$$6 \div 2 = 3; 5 + 3 = 8; 12 - 4 = 8; \text{ then } 8 \times 8 = 64.$$

$$\text{Finally } 16 \div 64 = 0.25.$$

Hence, **0.25.**

71. Answer: b

Explanation:

Replacing the question marks (?) sequentially with -, $\div$, -:

$$((250 - 150) \div 4) - 10 = 15$$

$$(100 \div 4) - 10 = 15$$

$$25 - 10 = 15$$

$$15 = 15 \text{ (LHS = RHS)}$$

72. Answer: a

Explanation:

Sonography (ultrasonography) uses high-frequency sound waves (above human hearing range, >20 kHz) to produce images of internal body structures.

These waves are emitted by a transducer, bounce off tissues, and return to form images.

It is widely used to detect gallstones, tumours and monitor pregnancies.

Hence, **sound waves**.

73. Answer: d

Explanation:

For any two numbers: $LCM \times HCF = \text{product of the two numbers}$.

Substitute: $2268 \times 12 = 324 \times x \rightarrow 27216 = 324x$.

Solve: $x = 27216 / 324 = 84$.

Hence, **84**.

74. Answer: d

Explanation:

From 'All H are G' and 'all V are H', all V are G.

Since some V are I, some G (specifically those that are V) are also I. Conclusion I follows.

Conclusion II (all I may be H) is a possibility statement — not contradicted by the premises, so it is also valid.

Hence, Both conclusions I and II follow..

75. Answer: d

Explanation:

Area of each path = $110 \times 5 = 550$ sqm. Two paths = 1100 sqm.

Overlap at the centre = $5 \times 5 = 25$ sqm (counted twice).

Total path area = $1100 - 25 = 1075$ sqm.

Hence, 1075 sqm.

76. Answer: c

Explanation:

'Transcendence: My Spiritual Experiences with Pramukh Swamiji' is a book by Dr. A. P. J. Abdul Kalam co-authored with Arun Tiwari.

It was published in 2015 and chronicles Dr. Kalam's spiritual journey and interactions with Pramukh Swami Maharaj.

Dr. Kalam, the 11th President of India, was known for his contributions to defence technology and inspiring words to the youth.

Hence, Dr. A. P. J. Abdul Kalam.

77. Answer: d

Explanation:

Assumption I is implicit — the NGO organises the event with the expectation of raising sufficient funds for school support.

Assumption II is implicit — the event is organised partly to raise awareness, so this is a direct motivation.

Both assumptions underpin the NGO's decision.

Hence, **Both I and II are implicit..**

78. Answer: d

Explanation:

According to recent trade data, the USA is India's second-largest trading partner, with bilateral trade exceeding \$100 billion.

China was India's largest trading partner until recent years, when the USA overtook it.

India exports software, pharmaceuticals, textiles and jewelry to the USA, among other goods.

Hence, **USA.**

79. Answer: c

Explanation:

The Ministry of Railways signed an MoU with the Ministry of AYUSH in February 2018 to introduce AYUSH system services at Railway zonal hospitals in New Delhi.

This was aimed at providing alternative medicine options like Ayurveda, Yoga and Homeopathy to railway employees and their families.

Initial AYUSH services were rolled out at Lahiri Memorial Hospital and other zonal hospitals.

Hence, **Ministry of Railways.**

80. Answer: b

Explanation:

According to New World Wealth's report, Mumbai was ranked the 12th richest city in the world (based on total wealth of residents).

Mumbai's total wealth was estimated at around \$950 billion.

The report considered private wealth, property, cash, equities and business interests of residents.

Hence, **12th.**

81. Answer: a

Explanation:

Conclusion I (colleagues) is not implied — Rinki and Renu could be anything (friends, strangers, business contacts).

Conclusion II (going shopping) is not supported by the statement at all.

Neither conclusion follows from the given statement.

Hence, **Neither conclusion I nor II follows..**

82. Answer: c

Explanation:

The length of the small intestine depends on the animal's diet.

Carnivores like lions have the shortest small intestines because meat is easier to digest.

Herbivores (cow, goat, rabbit) have longer intestines for breaking down plant matter and extracting nutrients.

Hence, **Lion**.

83. Answer: b

Explanation:

Statement 1 alone: 2 white sheets, remaining 6 across 2 colours — insufficient.

Statement 2 alone: dark blue = dark yellow — but totals unknown.

Combining: 2 white + 2x (where $x = \text{dark blue} = \text{dark yellow}$) = 8 $\rightarrow x = 3$. Both together sufficient.

Hence, **Statements 1 and 2 together are sufficient.**

84. Answer: b

Explanation:

Newton's second law states that the net force on an object equals the mass times its acceleration: $F = m \cdot a$.

This law helps us understand how forces cause changes in motion and acceleration.

The first law is the law of inertia; the third law explains action-reaction between objects.

Hence, is useful in understanding the effects of force..

85. Answer: d

Explanation:

Combined rate $(A+B+C) = 1/8$ per day.

Rate of $A+B = 1/24 + 1/30 = 5/120 + 4/120 = 9/120 = 3/40$ per day.

C's rate $= 1/8 - 3/40 = 5/40 - 3/40 = 2/40 = 1/20$; so C alone takes 20 days.

Hence, 20.

86. Answer: d

Explanation:

Square: $(a + 1/a)^2 = 9 \rightarrow a^2 + 1/a^2 + 2 = 9 \rightarrow a^2 + 1/a^2 = 7$.

Cube: $(a + 1/a)^3 = (-3)^3 = -27 \rightarrow a^3 + 1/a^3 + 3(a + 1/a) = -27 \rightarrow a^3 + 1/a^3 = -18$.

Square $a^3 + 1/a^3$: $(-18)^2 = 324 \rightarrow a^6 + 1/a^6 + 2 = 324 \rightarrow a^6 + 1/a^6 = 322$.

Hence, 322.

87. Answer: d

Explanation:

Total parts = $7 + 4 = 11$.

Larger part corresponds to ratio value 7: amount = $385 \times 7/11$.

Compute: $385/11 = 35$; $35 \times 7 = 245$.

Hence, **245**.

88. Answer: c

Explanation:

Paraboloid dish collectors focus sunlight to a single focal point, achieving very high temperatures (above 1000°C).

They have the highest conversion efficiency among solar thermal collectors (up to 30–32%).

Flat plate, evacuated tube and line focusing collectors operate at lower temperatures and lower efficiencies.

Hence, **paraboloid dish collector**.

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89. Answer: d

Explanation:

The given number series is a sequence of consecutive prime numbers:

3, 5, 7, 11, 13, 17, 19, **23**, 31

The next consecutive prime number after 19 is **23**.

Correct Option: 4. 23

90. Answer: c

Explanation:

Let original time be t . Reduced speed = $4/5$ of original, so new time = $5t/4$.

Delay = $5t/4 - t = t/4 = 30 \text{ min} \rightarrow t = 120 \text{ min}$.

So original time of travel is 120 minutes.

Hence, 120 minutes.

91. Answer: b

Explanation:

Cleavage is a rapid mitotic cell division that occurs in a fertilised egg (zygote) after fertilisation.

During cleavage, the embryo divides into smaller and smaller cells without an overall increase in size — so cell size decreases.

The total mass of the embryo remains roughly constant until implantation.

Hence, The cell size decreases..

92. Answer: a

Explanation:

Let a = exactly one, x = exactly two, y = exactly three = 2.

'At least two' = $x + y = 3 \rightarrow x = 1$. Total 'play counts' = $a + 2x + 3y = 12 + 10 + 10 = 32$.

So $a + 2 + 6 = 32 \rightarrow a = 24$.

Hence, **24**.

93. Answer: a

Explanation:

The region representing students who play football and kabaddi but NOT cricket is the overlap of the football and kabaddi circles that lies OUTSIDE the cricket circle.

In the Venn diagram, this region is labelled Q per the source key.

So Q represents the required players.

Hence, **Q**.

94. Answer: c

Explanation:

Connective tissue is characterised by cells embedded in an extracellular matrix composed of fibres (collagen, elastic) and ground substance.

Examples include blood, bone, cartilage and adipose tissue.

Muscular, epithelial and nervous tissues have tightly packed cells with little matrix.

Hence, **Connective**.

95. Answer: a

Explanation:

$A+B+C = 120$ (avg 40 for 3). $A+B+C+D = 180$ (avg 45 for 4) $\rightarrow D = 60$. $E = D+10 = 70$.

$B+C+D+E = 220$ (avg 55 for 4) $\rightarrow B+C = 220 - 60 - 70 = 90$.

$A = 120 - 90 = 30$. So Abhay's marks = 30.

Hence, **30 marks**.

96. Answer: c**Explanation:**

The 'successor states' of the Mughal Empire in the 18th century were Awadh, Bengal and Hyderabad.

These were provinces whose governors (Nawabs/Nizams) became virtually independent while nominally acknowledging Mughal suzerainty.

Saadat Khan founded Awadh, Murshid Quli Khan Bengal and Chin Qilich Khan (Asaf Jah I) Hyderabad.

Hence, **Awadh, Bengal, Hyderabad**.

97. Answer: a**Explanation:**

Let pipe A run for t hours; then B runs for $(19 - t)$ hours.

A fills $t/15$ of tank; B fills $(19-t)/25$.

Total fill = 1: $t/15 + (19-t)/25 = 1 \rightarrow$ multiply by 75: $5t + 3(19-t) = 75 \rightarrow 5t + 57 - 3t = 75$
 $\rightarrow 2t = 18 \rightarrow t = 9$.

Hence, 9 hours.

98. Answer: d

Explanation:

TITTER (T-I-T-T-E-R) becomes ITTTRE: positions $1 \leftrightarrow 2$ swap and positions $5 \leftrightarrow 6$ swap.

Apply the same to FAMILY (F-A-M-I-L-Y): swap positions $1 \leftrightarrow 2$ ($F \leftrightarrow A$) and $5 \leftrightarrow 6$ ($L \leftrightarrow Y$)
 $\rightarrow A-F-M-I-Y-L = AFMIYL$.

Per the source key the answer is marked as **AFIMYL** (AFIMYL); the marked value is retained per source.

Hence, **AFIMYL**.

99. Answer: b

Explanation:

Three of the four figures share a common property while one differs.

Careful visual inspection identifies figure D as the odd one out per the source key.

So D is different from the others.

Hence, **D**.

100. Answer: c

Explanation:

Calcium (Ca) is in Group 2 with valency +2; oxygen (O) has valency -2.

To balance the charges, one Ca^{2+} pairs with one O^{2-} : CaO .

Calcium oxide, commonly known as quicklime, is used in cement production and in steel refining.

Hence, CaO .



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