

ANSWER KEY

IBRAIN ENG JNV VST 001

IBRAIN | Class 5 — Full Test (VST)

MCQ Quick Reference (1-Mark Questions)

Q1. (A)	Q2. (C)	Q3. (B)	Q4. (B)
Q5. (B)	Q6. (D)	Q7. (C)	Q8. (B)
Q9. (A)	Q10. (D)	Q11. (D)	Q12. (D)
Q13. (D)	Q14. (C)	Q15. (C)	Q16. (A)
Q17. (A)	Q18. (D)	Q19. (C)	Q20. (A)
Q21. (C)	Q22. (B)	Q23. (C)	Q24. (B)
Q25. (B)	Q26. (B)	Q27. (D)	Q28. (B)
Q29. (A)	Q30. (C)	Q31. (D)	Q32. (B)
Q33. (B)	Q34. (A)	Q35. (C)	Q36. (C)
Q37. (C)	Q38. (B)	Q39. (C)	Q40. (A)
Q41. (C)	Q42. (C)	Q43. (B)	Q44. (A)
Q45. (C)	Q46. (C)	Q47. (A)	Q48. (A)
Q49. (A)	Q50. (C)	Q51. (D)	Q52. (A)
Q53. (A)	Q54. (A)	Q55. (A)	Q56. (A)
Q57. (D)	Q58. (C)	Q59. (C)	Q60. (B)
Q61. (B)	Q62. (C)	Q63. (B)	Q64. (B)
Q65. (B)	Q66. (B)	Q67. (A)	Q68. (D)
Q69. (A)	Q70. (B)	Q71. (B)	Q72. (D)
Q73. (C)	Q74. (B)	Q75. (C)	Q76. (C)

Q77. (C)

Q78. (B)

Q79. (C)

Q80. (B)

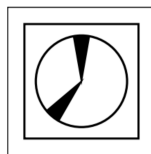
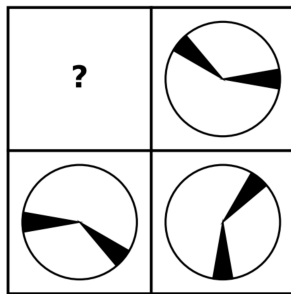
Detailed solutions on next pages

DETAILED SOLUTIONS

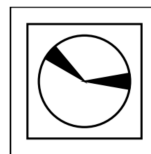
IBRAIN ENG JNV VST 001

Reasoning

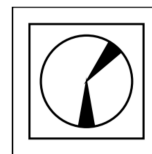
- Q1.** There is a question figure a part of which is missing. Observe the answer figures (A), (B), (C) and (D) and find out the answer figure which, without changing the direction, fits in the remaining part of the question figure in order to complete the pattern in the question figure.



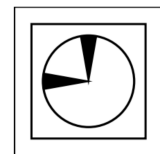
(A)



(B)



(C)

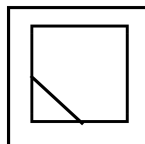
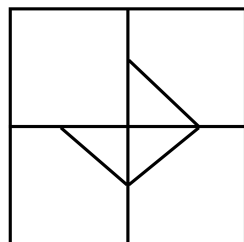


(D)

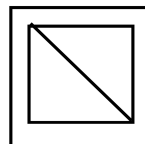
Answer: (A) A

Explanation: Figure A fits in the remaining part of the question figure without changing its direction and completes the pattern.

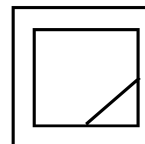
- Q2.** There is a question figure a part of which is missing. Observe the answer figure (A), (B), (C) and (D) and find out the answer figure which without changing the direction, fits in the remaining part of the question figure in order to complete the pattern in the question figure.



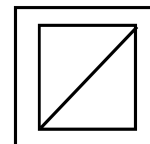
(A)



(B)



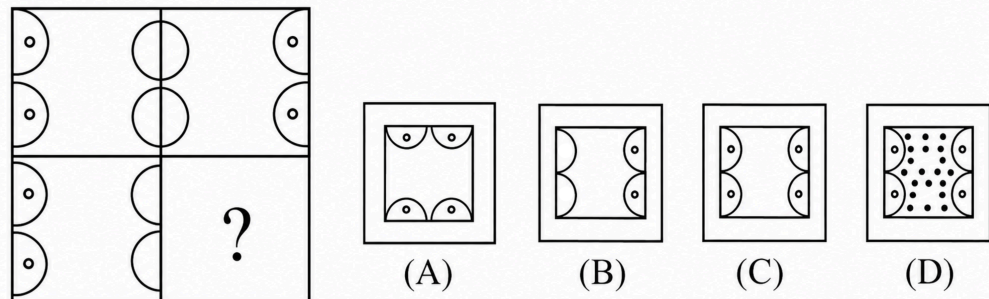
(C)



(D)

Answer: (C) C

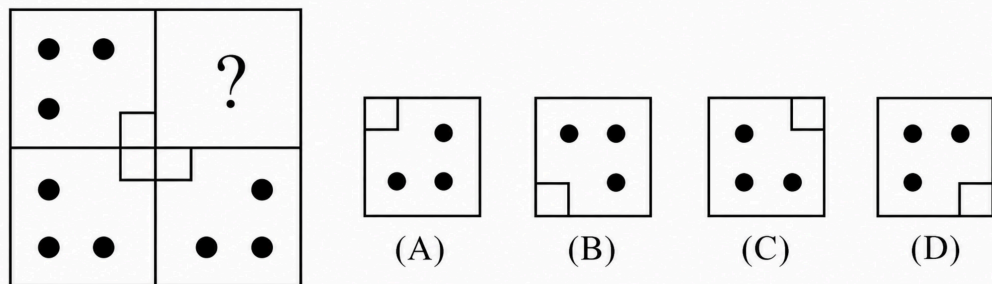
- Q3.** There is a question figure a part of which is missing. Observe the answer figures (A), (B), (C) and (D) and find out the answer figure which, without changing the direction, fits in the remaining part of the question figure in order to complete the pattern in the question figure.



Answer: (B) B

Explanation: Figure A fits in the remaining part of the question figure without changing its direction and completes the pattern.

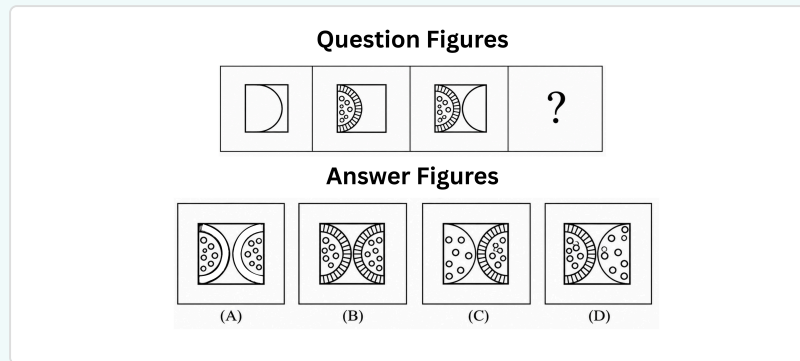
- Q4.** There is a question figure a part of which is missing. Observe the answer figures (A), (B), (C) and (D) and find out the answer figure which, without changing the direction, fits in the remaining part of the question figure in order to complete the pattern in the question figure.



Answer: (B) B

Explanation: Figure A fits in the remaining part of the question figure without changing its direction and completes the pattern.

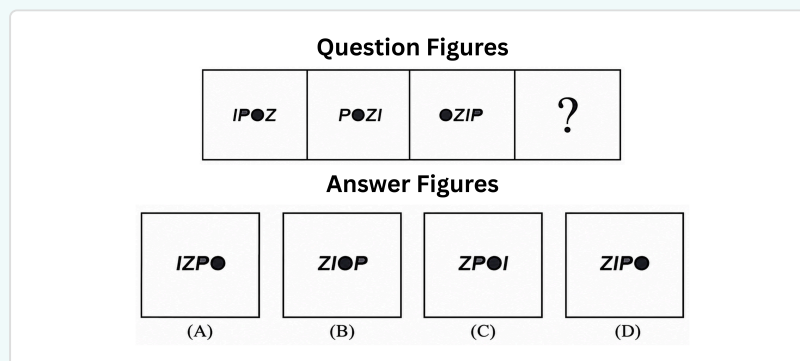
- Q5.** There is a question figure a part of which is missing. Observe the answer figures (A), (B), (C) and (D) and find out the answer figure which, without changing the direction, fits in the remaining part of the question figure in order to complete the pattern in the question figure.



Answer: (B) B

Explanation: Figure A fits in the remaining part of the question figure without changing its direction and completes the pattern.

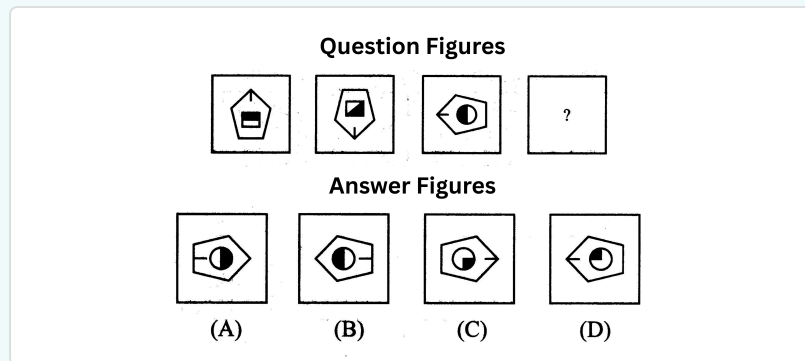
- Q6.** There is a question figure a part of which is missing. Observe the answer figures (A), (B), (C) and (D) and find out the answer figure which, without changing the direction, fits in the remaining part of the question figure in order to complete the pattern in the question figure.



Answer: (D) D

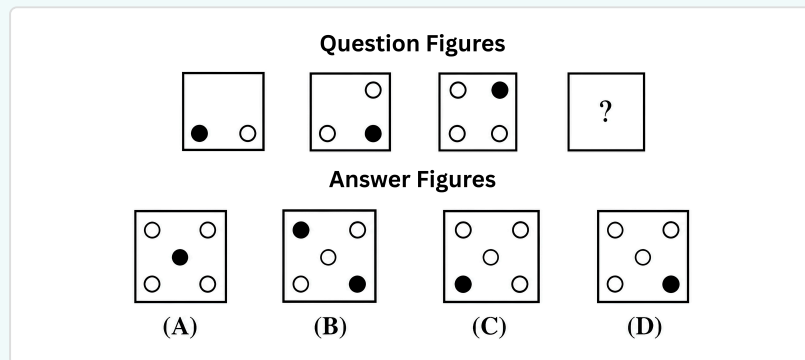
Explanation: Figure A fits in the remaining part of the question figure without changing its direction and completes the pattern.

- Q7.** There are three question figures and the space for the fourth figure is left blank. The question figures are in a series. Find out one figure from among the answer figures given which occupies the blank space for the fourth figure and completes the series.



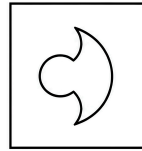
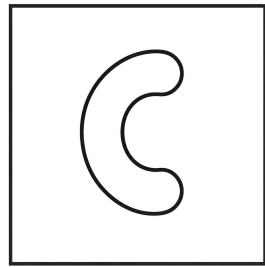
Answer: (C) C

- Q8.** There are three question figures and the space for the fourth figure is left blank. The question figures are in a series. Find out one figure from among the answer figures given which occupies the blank space for the fourth figure and completes the series.

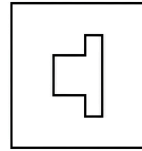


Answer: (B) B

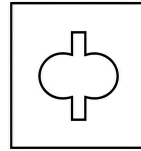
- Q9.** A part of a geometrical figure (such as a triangle, square, circle, etc.) is given as the Question Figure, and the remaining part is present in one of the four Answer Figures—(A), (B), (C), or (D). Identify the Answer Figure which, when combined with the given Question Figure, completes the geometrical figure correctly.



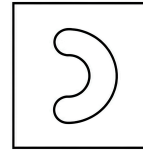
(A)



(B)



(C)

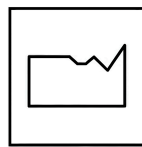
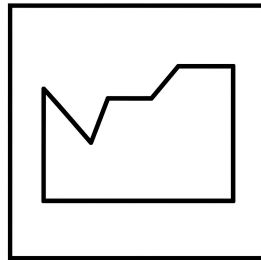


(D)

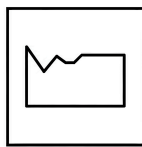
Answer: (A) A

Explanation: Answer Figure (A), when combined with the given Question Figure, completes the geometrical figure correctly.

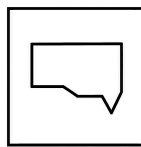
- Q10.** A part of a geometrical figure (such as a triangle, square, circle, etc.) is given as the Question Figure, and the remaining part is present in one of the four Answer Figures—(A), (B), (C), or (D). Identify the Answer Figure which, when combined with the given Question Figure, completes the geometrical figure correctly.



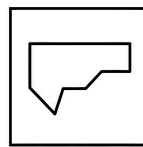
(A)



(B)



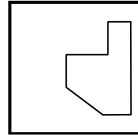
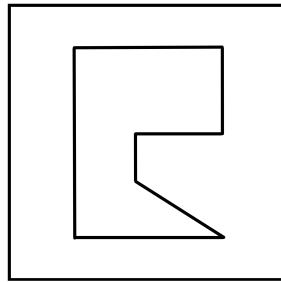
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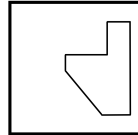
(D)

Answer: (D) D

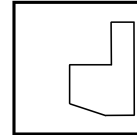
- Q11.** A part of a geometrical figure (such as a triangle, square, circle, etc.) is given as the Question Figure, and the remaining part is present in one of the four Answer Figures—(A), (B), (C), or (D). Identify the Answer Figure which, when combined with the given Question Figure, completes the geometrical figure correctly.



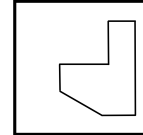
(A)



(B)



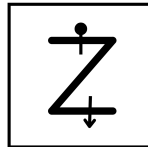
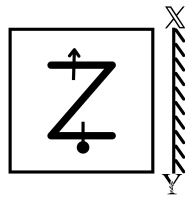
(C)



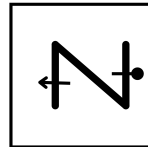
(D)

Answer: (D) D

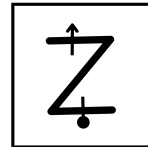
- Q12.** A figure or word is given. Find how it would look in a mirror placed beside it and choose the correct mirror image from the options.



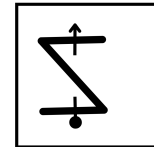
(A)



(B)



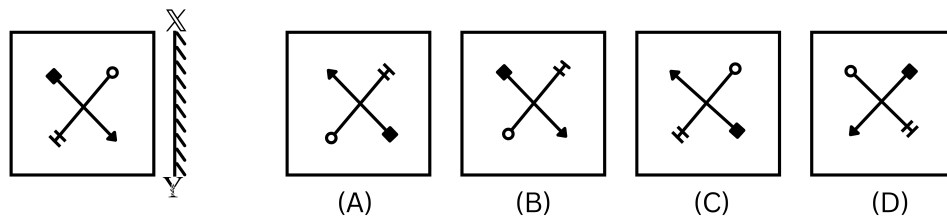
(C)



(D)

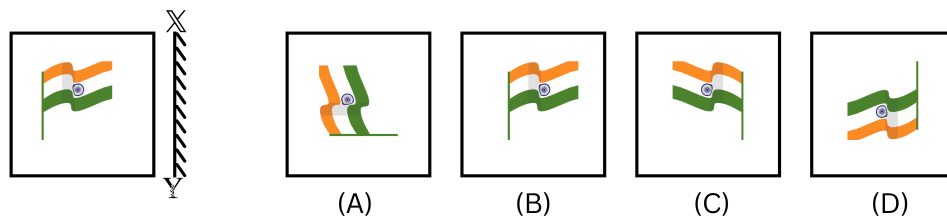
Answer: (D) D

- Q13.** A figure or word is given. Find how it would look in a mirror placed beside it and choose the correct mirror image from the options.



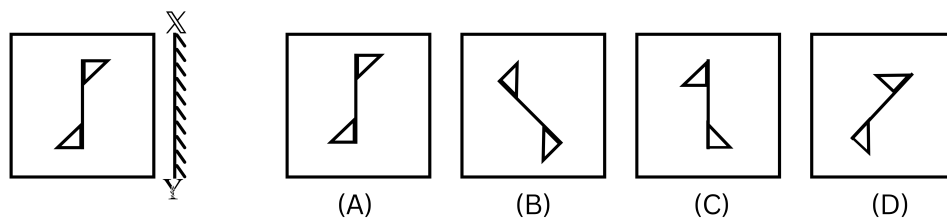
Answer: (D) D

- Q14.** A figure or word is given. Find how it would look in a mirror placed beside it and choose the correct mirror image from the options.



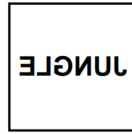
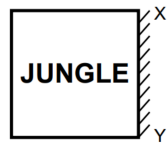
Answer: (C) C

- Q15.** A figure or word is given. Find how it would look in a mirror placed beside it and choose the correct mirror image from the options.



Answer: (C) C

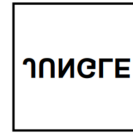
- Q16.** A figure or word is given. Find how it would look in a mirror placed beside it and choose the correct mirror image from the options.



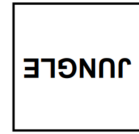
(A)



(B)



(C)

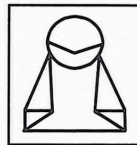
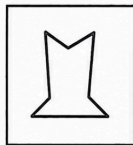


(D)

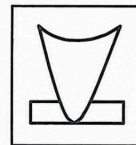
Answer: (A) A

Explanation: Option A shows the correct mirror image of the given figure or word.

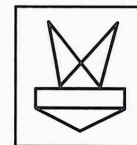
- Q17.** A question figure is given and four answer figures marked (A), (B), (C) and (D) are given. Select the answer figure in which the question figure is hidden/embedded within it.



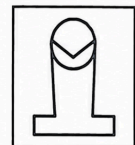
(A)



(B)



(C)

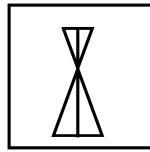
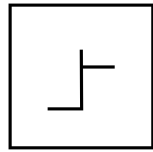


(D)

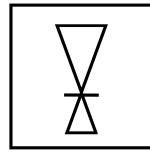
Answer: (A) A

Explanation: Option A contains the question figure hidden/embedded within it.

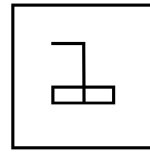
- Q18.** A question figure is given and four answer figures marked (A), (B), (C) and (D) are given. Select the answer figure which the question figure is hidden/embedded.



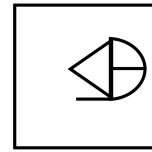
(A)



(B)



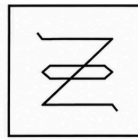
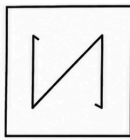
(C)



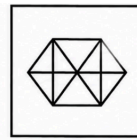
(D)

Answer: (D) D

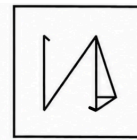
- Q19.** A question figure is given and four answer figures marked (A), (B), (C) and (D) are given. Select the answer figure in which the question figure is hidden/embedded.



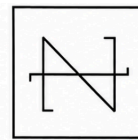
(A)



(B)



(C)

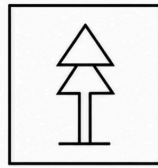
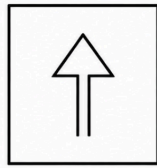


(D)

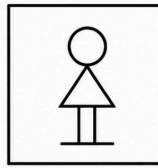
Answer: (C) C

Explanation: Option B contains the question figure hidden/embedded within it.

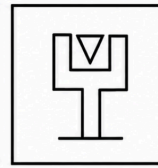
- Q20.** A question figure is given and four answer figures marked (A), (B), (C) and (D) are given. Select the answer figure in which the question figure is hidden/embedded.



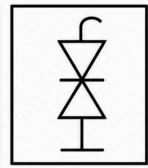
(A)



(B)



(C)



(D)

Answer: (A) A

Explanation: Option A contains the question figure hidden/embedded within it.

EVS

- Q21.** Which of the following choices correctly orders 3 stages of the water cycle as presented in the chapter?

Answer: (C) Evaporation → Condensation → Precipitation

Explanation: The textual order and logical flow is Evaporation -> Condensation -> Precipitation -> Run Off.

- Q22.** According to your book, what specific environmental condition causes water vapours to directly convert into snow or ice?

Answer: (B) Areas of very low temperature

Explanation: The text states, "In areas of very low temperature water vapours directly convert into snow (ice)."

- Q23.** Which city is the capital of Tripura?

Answer: (C) Agartala

Explanation: Agartala is the capital city of Tripura.

Q24. The Qutb Minar holds the national record for being the tallest what?

Answer: (B) Brick Tower

Explanation: Qutb Minar is recorded as the tallest brick tower.

Q25. Which two traditional structures both explicitly serve the function of recharging groundwater?

Answer: (B) Johads and Eris

Explanation: The text explicitly states that both Johads and Eris recharge groundwater.

Q26. Throughout India, rooftop rainwater harvesting involves storing water in tanks or directing it to do what?

Answer: (B) Recharge groundwater

Explanation: Rainwater collected from rooftops is stored in tanks or directed to recharge groundwater.

Q27. Which of the following airports is NOT located in Kerala?

Answer: (D) Mangalore International Airport

Explanation: Mangalore International Airport is located in Karnataka, while Cochin, Kozhikode, and Kannur are in Kerala.

Q28. Which of the following countries does NOT have a section of the Grand Trunk Road passing through it?

Answer: (B) Myanmar

Explanation: The Grand Trunk Road borders Myanmar at Teknaf, Bangladesh, but passes through Bangladesh, India, Pakistan, and Afghanistan, not Myanmar itself.

Q29. What phenomenon reduces oxygen availability for aquatic life due to the excessive growth of algae?

Answer: (A) Eutrophication

Explanation: Eutrophication, the excessive growth of algae due to fertilizers, reduces oxygen availability.

Q30. Which of the following is a disease-causing microorganism that pollutes water?

Answer: (C) Viruses

Explanation: Disease-causing microorganisms such as bacteria, viruses, and protozoa enter water.

Q31. Which of the following states is NOT covered by the Tapi river basin?

Answer: (D) Chhattisgarh

Explanation: The Tapi river covers parts of Madhya Pradesh, Maharashtra, and Gujarat.

Q32. What is the total length of the Kaveri river?

Answer: (B) 805 km

Explanation: The length of the Kaveri river is 805 km.

Q33. Before becoming adults, where do the young ones of amphibians usually live?

Answer: (B) In water

Explanation: The young ones of amphibians usually live in water before becoming adults.

Q34. Where do most birds build their nests?

Answer: (A) On trees or other safe places

Explanation: Most birds build nests on trees or other safe places.

Q35. What is the primary function of a frog's tympanum?

Answer: (C) To hear sounds clearly

Explanation: The visible eardrum (tympanum) helps them hear sounds clearly.

Q36. What are the deposits of rocks, sand, and sediment left behind by a melting glacier called?

Answer: (C) Moraines

Q37. Why do mushroom rocks in deserts have a narrow base and a broad top?

Answer: (C) Wind erodes the lower part of the rocks more rapidly than the upper part.

Q38. What are the small hills of sand formed by wind deposition in deserts called?

Answer: (B) Sand Dunes

Q39. Extensive deposits of wind-blown, very fine and light sand particles deposited over wide areas are known as:

Answer: (C) Loess

Q40. Compare the depositional features of glaciers and wind. Which of the following is correct?

Answer: (A) Glaciers deposit Moraines, while wind deposits Sand Dunes and Loess.

Mathematics

Q41. Average age of family of 4 is 20. If youngest is 5 yrs old, average age before his birth was:

Answer: (C) 20

Explanation: Current total = 80. 5 yrs ago, total = $80 - (4 \times 5) = 60$. Family members = 3. Avg = 20.

Q42. The average of 5 numbers is 100. If a number is removed, average becomes 90. Removed number is:

Answer: (C) 140

Explanation: $500 - (4 \times 90) = 500 - 360 = 140$.

Q43. The standard form of $100 + 70 + \frac{3}{10} + \frac{9}{1000}$ is ----

Answer: (B) 170.309

Q44. $0.63 = ?$

Answer: (A) $\frac{63}{100}$

Q45. Find the next term of the series 3, 6, 12, 24, 48, ?

Answer: (C) 96

Explanation: Multiply each term by 2 $\Rightarrow$ next term = $48 \times 2 = 96$.

Q46. Find the missing term in 4, 7, 12, 19, 28, ?

Answer: (C) 39

Explanation: Differences 3, 5, 7, 9, ... $\Rightarrow$ next +11 $\Rightarrow 28 + 11 = 39$.

Q47. In a division dividend is 8618, quotient 159 and remainder 32. What is the divisor?

Answer: (A) 54

Q48. A factory produces 3172 breads per day. How many breads will be produced from that factory in the month of June ?

Answer: (A) 95,160

Q49. A square field has a semicircular flower bed on one side (diameter = side). If side = 28 m, area of the bed is:

Answer: (A) 308 m²

Explanation: $A = \frac{1}{2}\pi r^2$ with $r = 14 \Rightarrow 308$.

Q50. 1 tractor can carry 200 bags of cement. Similarly, how many tractors will be required to transport 1000 bags of cement?

Answer: (C) 5 nos.

Q51. A bus travels 520 km. in 13 hours, how much distance will it cover in 7 hours?

Answer: (D) 280 km.

Q52. The L.C.M. of two or more Co-Prime numbers is given by their_____

Answer: (A) Product

Q53. If we eliminate one number from 5, 6, 7, 8, 9, 10 the L.C.M. of these numbers will remain unchanged as before. What is this number?

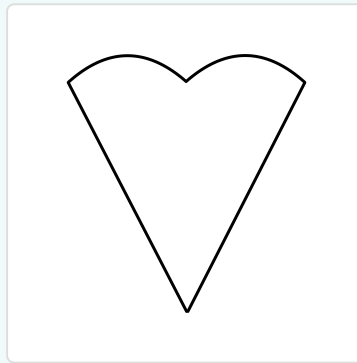
Answer: (A) 5

Q54. How many English alphabets are symmetrical?

Answer: (A) 16

Explanation: \textbf{Letters with exactly one line of symmetry (12 letters):}
Vertical: *A, M, T, U, V, W, Y* (7 letters) Horizontal: *B, C, D, E, K* (5 letters)
\textbf{Letters with two or more lines of symmetry (4 letters):} *H, I, O, X* \textbf{Total letters with at least one line of symmetry:} $12 + 4 = 16$ letters

Q55. How many lines of symmetry possible in above figure?



Answer: (A) 1

Q56. A number possesses exactly 8 factors. Furthermore, the number is known to be a direct multiple of 21. What is the number if it is definitively the smallest possible such number?

Answer: (A) 42

Explanation: Since it is a multiple of 21, its prime factors must include 3 and 7. For exactly 8 factors, a prime factorization form of $p^1 q^1 r^1$ yields $(1 + 1)(1 + 1)(1 + 1) = 8$. Using the smallest additional prime 2, the number is $2^1 \times 3^1 \times 7^1 = 42$.

Q57. Find the smallest 3-digit number which is a multiple of 7 and leaves a remainder of 3 when divided by 4, 5, and 6.

Answer: (D) 483

Explanation: The LCM of 4, 5, and 6 is 60. The number is of the form $60k + 3$. Checking multiples for divisibility by 7: $k = 1 \Rightarrow 63$ (not 3-digit); $k = 2 \Rightarrow 123$ (no); $k = 3 \Rightarrow 183$ (no)... continuing this pattern, for $k = 8 \Rightarrow 483$. Since $483 \div 7 = 69$, 483 is the answer.

Q58. Evaluate the difference of large squares: $(1001)^2 - (999)^2$

Answer: (C) 4000

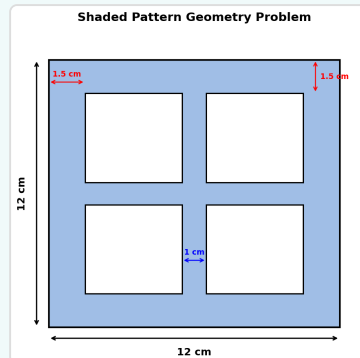
Explanation: Use the identity $a^2 - b^2 = (a - b)(a + b)$. Let $a = 1001$ and $b = 999$. $(1001 - 999) \times (1001 + 999) = 2 \times 2000 = 4000$.

Q59. Simplify the expression with a vinculum: $16 - [9 - \{4 - (5 - \overline{4 - 3})\}]$

Answer: (C) 7

Explanation: Solve the vinculum (bar) first: $\overline{4 - 3} = 1$. The small bracket becomes $(5 - 1) = 4$. The curly bracket becomes $\{4 - 4\} = 0$. The square bracket becomes $= 9$. Finally, $16 - 9 = 7$.

- Q60.** In the given figure, a decorative blue pattern is printed on a square card of side 12 cm . The shaded pattern is designed such that a border of width 1.5 cm is left unshaded along the outer edges, a central unshaded cross of width 1 cm divides the center of the card, and the remaining area forms four identical unshaded square regions. What is the total area of the blue shaded region?



Answer: (B) 80 cm^2

Explanation: The total area of the square card is $12\text{ cm} \times 12\text{ cm} = 144\text{ cm}^2$. Let s be the side length of one of the four identical unshaded squares. Resolving the horizontal width from left to right gives: $1.5\text{ cm} + s + 1\text{ cm} + s + 1.5\text{ cm} = 12\text{ cm} \Rightarrow 2s + 4\text{ cm} = 12\text{ cm} \Rightarrow 2s = 8\text{ cm} \Rightarrow s = 4\text{ cm}$. The area of one unshaded square is $4\text{ cm} \times 4\text{ cm} = 16\text{ cm}^2$. The combined area of all four unshaded squares is $4 \times 16\text{ cm}^2 = 64\text{ cm}^2$. Subtracting this unshaded area from the total area yields the shaded region: $144\text{ cm}^2 - 64\text{ cm}^2 = 80\text{ cm}^2$.

Language

- Q61.** Why was the Great Wall of China originally built?

Answer: (B) To protect the empire from invasions

- Q62.** Choose the correct statement.

Answer: (C) The wall was built over many centuries.

- Q63.** Give the antonym of 'harsh' as used in the passage.

Answer: (B) Gentle

Q64. Who worked to build the Great Wall?

Answer: (B) Soldiers and peasants

Q65. The word 'stretches' in the passage means:

Answer: (B) Extends

Q66. A farmer lived with —

Answer: (B) his wife and son

Q67. What did mongoose look when it grew ?

Answer: (A) lovely

Q68. How long did it take the mongoose to grow to its full size ?

Answer: (D) five or six months

Q69. When did the farmer bring with him a tiny mongoose ?

Answer: (A) one evening

Q70. Why did the farmer want to keep a pet?

Answer: (B) He wanted their son to have a companion when he grew up

Q71. 1. The man was troubled because ____

Answer: (B) B. the blacksmiths' hammers made a lot of noise

Q72. 2. The man gave them money because ____

Answer: (D) D. he wanted them to find new huts

Q73. 3. The man went out of his house because ____

Answer: (C) C. he wanted to find out why they hadn't found new huts

Q74. 4. The man came to know that ____

Answer: (B) B. the blacksmiths had exchanged huts

Q75. 5. The opposite word agree is ____

Answer: (C) C. refuse

Q76. What was Sameer's favourite place in the city?

Answer: (C) The community library

Q77. Why was the library in danger of closing?

Answer: (C) It lacked funds

Q78. What event did Sameer and his classmates organise?

Answer: (B) Reading Marathon

Q79. Who participated in the event?

Answer: (C) Parents, students, and shopkeepers

Q80. What did Sameer feel at the end?

Answer: (B) Proud