

SNAP 2020 Answer Key PDF

GENERAL ENGLISH

[Q1] . (b) . To reveal a secret .

Explanation - The idiom 'spilling the beans' refers to the act of unintentionally or indiscreetly making known information that was intended to be kept confidential. It originated from ancient voting systems where beans were used, and accidentally knocking over a container would reveal the results before the official count. In the provided example, Kate accidentally shares details about a surprise party, thereby ruining the secret and fulfilling the definition of the phrase.

[Q2] . (d) . Speaking continuously .

Explanation - To talk 'nineteen to the dozen' means to speak very rapidly, incessantly, and often energetically about a particular subject or topic. The phrase suggests a high rate of speech where one is speaking much faster than is typical or necessary for the conversation at hand. It is commonly used to describe someone who is highly excited or passionate, causing them to communicate in a hurried and constant manner.

[Q3] . (a) . Simile .

Explanation - A simile is a figure of speech that makes a direct comparison between two different things using the words 'like' or 'as' to create imagery. In the famous line by Wordsworth, the speaker compares his state of wandering to a cloud to emphasize a sense of detachment and serenity. By using the word 'as', the poet establishes a clear and imaginative link between human movement and the natural drifting of weather patterns.

[Q4] . (d) . Metaphor .

Explanation - A metaphor is a figure of speech that describes an object or action in a way that isn't literally true but helps explain an idea through comparison. Unlike a simile, it does not use 'like' or 'as'; instead, it states that the subject is the same as the thing it is being compared to for effect. In this sentence, comparing a child to a fire that needs to be lit highlights the role of inspiration and growth in a young person's development.

[Q5] . (a) . From .

Explanation - The verb 'prevented' is habitually followed by the preposition 'from' when indicating the action or occurrence that was stopped from happening. The standard

grammatical structure used here is 'prevent someone from doing something', where the preposition links the subject to the restricted activity. Using other options like 'while' or 'in' would break the syntactic rules of the sentence and fail to convey the intended meaning of an obstruction.

[Q6] . (b) . So .

Explanation - The conjunction 'so' is used to connect a cause to its logical effect or result within the structure of a complex or compound sentence. In this case, the severe tooth pain is the underlying cause that leads to the necessary consequence of visiting a professional medical doctor. It acts as a functional bridge that explains the motivation behind the action taken in the second part of the provided English statement.

[Q7] . (c) . So .

Explanation - In this context, 'so' functions as an adverb of degree used to modify the adjective 'excited' and emphasize the intensity of the emotion shown. It helps to quantify the level of excitement the subject felt, making the description more vivid and emotionally resonant for the reader. This specific usage is common in descriptive writing to illustrate the visible impact of a reunion or a significant personal event.

[Q8] . (c) . Choir .

Explanation - A 'choir' is the specific collective noun used to describe a structured group of people who sing together, often in a religious or formal setting. While 'team' or 'class' refer to other types of organized groups, they do not carry the specific musical connotation required by the noun 'singers'. Using the correct collective noun ensures clarity and professional precision in English when describing various categories of people and their activities.

[Q9] . (d) . would be a good .

Explanation - The phrase 'would be a good' uses the conditional mood to describe a hypothetical improved state of the world that has not yet been achieved. It expresses a hope or a potential outcome based on certain changes, following standard rules for making general evaluative statements about the future. The adjective 'good' correctly modifies 'place', creating a grammatically sound and contextually appropriate sentence regarding global improvement.

[Q10] . (b) . Irretrievable .

Explanation - The word 'Irretrievable' is correctly spelled with a double 'r' and the 'ie' vowel combination following the standard 'i before e except after c' rule. It describes something that is impossible to recover, regain, or set right once it has been lost or damaged by time or circumstance. The other options provided in the list contain common orthographic errors that would be considered incorrect in formal written communication.

[Q11] . (c) . Profusely .

Explanation - To apologize 'profusely' means to express regret in an abundant, excessive, or highly frequent manner to ensure the recipient understands the sincerity. This adverb is used when a person wants to convey a deep sense of remorse, often repeating

their apologies multiple times for a significant mistake. It comes from a root meaning 'to pour forth', suggesting that the words of regret are flowing out in a large and continuous volume.

[Q12] . (a) . Holed up .

Explanation - The phrasal verb 'holed up' means to stay in a particular place, often as a refuge or to hide from others or bad weather. In the context of a ship, it suggests seeking shelter in a harbor or a protected area to avoid dangerous conditions at sea or for repairs. The explanation provided in the original key emphasizes the idea of taking shelter, making this the most appropriate choice for the blank.

[Q13] . (d) . Raincheck .

Explanation - A compound word is formed when two distinct words are combined to create a new word with a specific, unified meaning of its own. 'Raincheck' combines 'rain' and 'check' to refer to a ticket given for a postponed event or a promise to accept an invitation at a later date. Unlike 'Butterfly', which is a single root, or 'Knowledge', which is a derived noun, 'raincheck' clearly demonstrates the fusion of two independent nouns.

[Q14] . (b) . Liberal .

Explanation - The term 'Largesse' refers to the generous bestowal of money or gifts upon others, often from a person of higher status to those below them. 'Liberal' in this sense means giving freely and generously, capturing the essence of the word's meaning in terms of financial or social charity. It is frequently used in historical or formal contexts to describe the noble quality of being open-handed with one's personal or state wealth.

[Q15] . (c) . Conscientious .

Explanation - 'Conscientious' is the correct spelling for the adjective describing someone who is thorough, careful, and vigilant in performing their duties. The spelling is challenging because it combines the root 'conscience' with the suffix '-tious', requiring careful attention to the placement of 'sc' and 'ti'. This word is often tested in aptitude exams due to its complex orthography and its frequent use in professional performance evaluations.

QUANTITATIVE, DATA INTERPRETATION AND DATA SUFFICIENCY

[Q16] . (c) . 14.5% .

Explanation - To find the equivalent single discount of 10% and 5%, we use the successive percentage formula: $A + B - \frac{AB}{100}$. Plugging in the values, we get $10 + 5 - \frac{50}{100}$, which results in a total reduction of exactly 14.5% from the original price. This mathematical principle is essential for understanding how multiple discounts are applied in retail and financial transactions.

[Q17] . (b) . 62.25% .

Explanation - If the cost is 100, the original selling price is 112. The new cost becomes 90 and the new selling price is 107.52 (4% less than 112). The new profit is 17.52 on a cost of 90, which equals 19.47%, representing a significant increase over the initial 12% profit margin. The percentage increase in the profit rate itself is calculated by $\frac{19.47-12}{12}$, which results in the final answer of 62.25%.

[Q18] . (d) . None of these .

Explanation - At compound interest, if a sum doubles in 5 years, it will quadruple in 10 years and increase by a factor of 16 in 20 years. Multiplying the original principal of 15,000 by 16 gives a final amount of 240,000, which is not listed among the first three options. Therefore, the correct choice is 'None of these' because the calculated total exceeds all the specific numerical values provided in the list.

[Q19] . (a) . 12800 .

Explanation - We set up an equation where the interest from both schemes (x at 14% and $27800 - x$ at 11% for 2 years) equals a total of 7,016. Solving for x gives the amount in the first scheme as 15,000, which we subtract from the total capital of 27,800 to find the second part. The resulting calculation shows that 12,800 rupees were invested in the second scheme, satisfying the conditions of the interest problem.

[Q20] . (c) . A = 225, B = 150, C = 75 .

Explanation - After A and B work for 5 days, they complete $\frac{5}{6}$ of the task, leaving $\frac{1}{6}$ for C to finish in his two days of work. Their shares of the total 450 rupees are proportional to the amount of work each performed: A ($\frac{1}{2}$), B ($\frac{1}{3}$), and C ($\frac{1}{6}$). This results in payments of 225 for A, 150 for B, and 75 for C, as each is paid according to their individual contribution.

[Q21] . (c) . 35.2 .

Explanation - To find the average, we first sum the ages: 2 grandparents (128), 2 uncles (84), 2 aunts (76), and 4 cousins (64). Adding these together gives a total of 352 years for the entire family of ten people who are currently being considered in the survey. Dividing the total sum of 352 by the 10 family members results in an average age of 35.2 years for the group.

[Q22] . (a) . 40% .

Explanation - Starting with salaries of $7x$, $6x$, and $5x$, A's salary increases by 20% to become $8.4x$ in the following year. The new ratio for A and B is 3:3, meaning B's new salary must also be $8.4x$ to maintain the equality required by the ratio. B's increase is $\frac{8.4x-6x}{6x}$, which equals 0.4, or a 40% growth in salary for the second individual in the group.

[Q23] . (d) . None of these .

Explanation - The sum of their ages is 42, and five years ago, the product of their ages was 60, leading to the ages of 35 and 7. Since the mother is currently 35 years old and this number is not among the options (a) 40, (b) 38, or (c) 32, we choose (d). This algebraic problem is solved by using a system of two equations to find the current ages of both the mother and the daughter.

[Q24] . (b) . 4 .

Explanation - Given the relationships $A = 2B$ and $B = 2C$, we express everything in terms of C , giving $A = 4C$ and $B = 2C$ for the calculations. Setting the average of their reciprocals $\frac{1/4C + 1/2C + 1/C}{3}$ equal to $7/12$ allows us to solve for the value of C . Finding that C equals 1 leads directly to the conclusion that A must equal 4, satisfying all the proportional constraints provided.

[Q25] . (c) . 0.5 .

Explanation - Using the change of base formula, the expression can be written as $\log(8)$ divided by $\log(64)$ to find the numerical result. Since 64 is equal to 8^2 , the denominator becomes $2 \times \log(8)$, which allows the log terms to cancel out completely. This leaves a final value of 1 divided by 2, or 0.5, which is the correct logarithmic solution for the given mathematical problem.

[Q26] . (b) . (x^2+3) .

Explanation - The polynomial $x^4 + 4x^2 + 3$ can be factored into $(x^2 + 1)(x^2 + 3)$ by treating it as a quadratic in terms of x^2 . Among the options provided, only the factor $(x^2 + 3)$ appears in the list, making it the correct choice for the question. Factoring higher-degree equations in this way is a standard technique for identifying roots and divisibility in algebra.

[Q27] . (a) . 96% .

Explanation - When the length is increased by 20% and the width is decreased by 20%, the new area is 1.2×0.8 of the original. This multiplication results in 0.96, indicating that the area of the new rectangle is exactly 96% of the area of the original square. The overall change is a 4% decrease, but the question specifically asks for the percentage the new area will be of the old.

[Q28] . (b) . 2.13 cm .

Explanation - The volume of the immersed cube is 512 cubic cm, which will cause an equal volume of water to be displaced in the vessel. Dividing this volume by the base area of the rectangular vessel ($12 \text{ cm} \times 20 \text{ cm} = 240$) gives the height of the water rise. The calculation $512 / 240$ results in a rise of 2.13 cm, which corresponds to option (b) in

the provided multiple-choice list.

[Q29] . (c) . $(\sqrt{2}+1)/\sqrt{2}$.

Explanation - The value of $\sin 45^\circ$ is $1/\sqrt{2}$ and the value of $\tan 45^\circ$ is 1, so the expression is simply their sum. Combining these into a single fraction gives $\frac{1+\sqrt{2}}{\sqrt{2}}$, which matches the structure of the third provided choice. This requires basic knowledge of trigonometric values for standard angles and simple fractional addition to find the final simplified form.

[Q30] . (b) . 1 .

Explanation - Since 42° and 48° are complementary angles, the sine of one is exactly equal to the cosine of the other ($\sin x = \cos(90^\circ - x)$). Therefore, the numerator and denominator of the fraction are identical values, which results in a final quotient of exactly 1. This identity is a fundamental property of trigonometric ratios in right-angled triangles where the two non-right angles sum to 90° .

ANALYTICAL & LOGICAL REASONING

[Q31] . (d) . None of these .

Explanation - The pattern in the series involves multiplying alternately by 8 and 9: $11 \times 8 = 88$, $88 \times 9 = 792$, $792 \times 8 = 6336$, and so on. Following this sequence, the final number provided in the list (456,192) is correctly reached by multiplying the previous term by 8. Since all the provided options (704, 862, 764) are far lower than the terms in the actual sequence, 'None of these' is correct.

[Q32] . (b) . 24 .

Explanation - The probability of picking a white toy is 1 minus the combined probabilities of picking black ($1/3$) and green ($4/9$). This leaves a probability of $2/9$ for the white toys, which we then multiply by the total number of 108 toys in the bag. Performing the calculation $2/9$ times 108 gives a total of 24 white toys, which identifies the quantity requested in the problem.

[Q33] . (c) . 75 kg .

Explanation - By calculating the total weights for the different groups of four, we isolate the weight of D as 68 kg and E as 71 kg. We find the combined weight of B and C is 177 kg by subtracting D and E from the second group's total of 316 kg. Finally, subtracting the 177 kg of B and C from the first group's total of 252 kg leaves exactly 75 kg for the weight of A.

[Q34] . (b) . 4096 .

Explanation - The digits of the number sum to 10 and the number differs from its reverse by 18, leading to the unique digits 6 and 4. The original number is 64, and the question asks for the square of this number rather than the digits themselves. Squaring 64 (64×64) results in 4,096, which is one of the standard powers often memorized for such quantitative exams.

[Q35] . (c) . 55 .

Explanation - To minimize stores while ensuring each has the same number of loaves, we must find the Highest Common Factor of 60, 76, and 84. The HCF is 4, meaning each store will receive 4 loaves from each brand, requiring a specific number of stores to cover the stock. Calculating the stores needed for each brand (15, 19, and 21) and summing them gives a total of 55 stores for the distribution.

[Q36] . (a) . 117 .

Explanation - The series is formed by two alternating sequences where the first, third, and fifth terms increase by exactly 28 each time. Starting at 61, the next term in this sub-sequence is 89, followed by 117, which fits perfectly into the missing slot provided. This logical structure is confirmed as the second sub-sequence (74, 97, 121) also follows its own consistent pattern of increasing additions.

[Q37] . (d) . Neither I nor II follow .

Explanation - The overlapping relationship 'Some As are Bs' and 'Some Bs are Cs'

does not guarantee any direct intersection between set A and set C. While they might overlap, it is not a logical necessity, and there is certainly no basis for the claim that all Cs are As. Since neither conclusion can be proven with absolute certainty from the given premises, the 'Neither' option is the only valid choice.

[Q38] . (b) . only (II) is true .

Explanation - The inequality $H < G = J > K$ shows that while H is less than G, there is no direct comparative link between H and K. However, because G and J are equal and J is greater than K, it is logically certain that G is also greater than K. This makes the second conclusion a mathematical truth based on transitivity, while the first remains an unproven possibility in the logic.

[Q39] . (b) . 19 .

Explanation - In a row of 40, B's position from the right as 9th means he is at the 32nd position when counting from the left end. With A at the 12th position and B at the 32nd, the number of people between them is $(32 - 12 - 1)$. Performing this subtraction results in 19, representing the exact count of individuals standing in the space between the two named people.

[Q40] . (d) . GATO .

Explanation - By rearranging the jumbled letters, we find the words FISH, BOAT, and BUOY, all of which are related to aquatic environments. The fourth word, GATO, rearranges to form GOAT, which is a land animal and bears no thematic relation to the water-based items. This classification makes GOAT the odd one out, as it does not share the common defining characteristic of the first three words.

[Q41] . (a) . C6 .

Explanation - The letters in the series follow a simple alphabetical order (A, B, C, D), while the numbers follow a decreasing pattern. Starting at 15 and 10, the gap of 5 suggests a diminishing difference, where the next subtraction is 4, leading to the number 6. This pattern is confirmed as the final term 'D3' is reached by subtracting 3 from 6, making 'C6' the correct missing term.

[Q42] . (c) . North .

Explanation - By tracking the movements (North, East, South, East, North), we see the final turn to the left brings the person back to North. The series of right and left turns on the grid effectively cancels out most of the directional changes except for the final alignment. The question asks for the final facing direction, which is determined to be North after the person completes their last 90-degree turn.

[Q43] . (a) . 182 .

Explanation - In each column, the bottom number is the product of the top number and the number one higher than the middle number's factor. For the missing value, we use the pattern derived from the first and third columns where (top number * constant) equals the target. Following the logic 13×14 results in 182, which maintains the mathematical consistency established by the other sets in the provided grid.

[Q44] . (b) . 36 .

Explanation - The number of people attending exactly two seminars is found by summing the specific overlaps for each pair of subjects. This includes those in Physics/Math (14), Physics/Biology (7), Biology/Math (5), and Chemistry/Math (10) as shown in the diagram. Adding these figures ($14 + 7 + 5 + 10$) gives a total of 36, representing the group that participated in precisely two different areas.

[Q45] . (a) . 12 .

Explanation - By substituting the letters with their assigned operations ($8 \times 16/32 + 16 \times 32/64$), we create a standard math expression. Following the order of operations, the first part simplifies to 4 and the second part simplifies to 8 through basic division. Adding these two results together ($4 + 8$) gives 12, which is the correct numerical outcome for this coded mathematical puzzle.

[Q46] . (c) . Either I or II follow .

Explanation - Broadening roads is a necessary public goal, but it must be balanced by either rehabilitating those displaced or compensating them fairly. Both actions serve to mitigate the negative impact on residents, and a responsible government would choose at least one of these paths. Since both are reasonable and ethical responses to the situation described, the 'Either' option is selected as the logical course of action.

[Q47] . (c) . Lethargy has its origins in an individual's family background .

Explanation - This assumption attempts to provide an underlying cause for the behavior observed in the argument about shoes and lethargy. It suggests that the personality trait is not merely a surface habit but is rooted in a deeper, possibly inherited or learned, family history. While it is the choice provided in the solved paper, it serves as a psychological premise to explain why someone might be consistently lethargic.

[Q48] . (c) . 8 .

Explanation - The central number is the square root of the positive difference between the two numbers shown on the outer edges of the segment. For the missing segment, we calculate the difference between 90 and 26, which is 64, and then find its root. The square root of 64 is 8, which fits the mathematical rule applied to every other section of the circular logic puzzle.

[Q49] . (b) . 07142418 .

Explanation - The code is created by taking each letter's alphabetical position and adding 13, then adjusting for values over 26. For 'TAKE', T($20 + 13 = 33$) becomes 07 after subtracting 26, and the other letters A(14), K(24), and E(18) are calculated directly. Concatenating these results yields the final code of 07142418, which follows the transformation rule established by the 'DIP' example.

[Q50] . (d) . Number of students who play at least one of Cricket or Soccer .

Explanation - By summing the values within the boundaries of the Pentagon and Rectangle, we find 71 students, which is higher than other groups. This total includes every student represented in those specific shapes, encompassing both exclusive players and

those participating in overlapping combinations. Comparing this to the Hockey/Baseball group (66) or those playing exactly one sport (35) confirms it is the highest value in the diagram.

[Q51] . (b) . 123 .

Explanation - In a $5 \times 5 \times 5$ cube, only the corner cubes can have three faces painted, but some corners here remain unpainted or partially painted. The solution indicates that only two cubes in this specific configuration have three faces painted, leaving the rest with fewer. Subtracting those two from the total of 125 gives 123 small cubes that have at most two of their faces painted.

[Q52] . (a) . 24863 .

Explanation - This number satisfies all conditions: it starts and ends with primes, the 3rd digit is a cube (8), and 2×4 equals 8. Additionally, the sum of the first two digits (6) matches the sum of the fourth and fifth (9) in a specific comparative logic. Finally, the last digit 3 is exactly half of the fourth digit 6, completing all the requirements for the unique ATM PIN.

[Q53] . (a) . R .

Explanation - After removing all vowels from the string, we count positions relative to the 10th letter from the right, which is T. Moving five spots to the left brings us to R, and then moving eight spots back to the right lands on the same letter 'R'. This positional logic is a common test of focus and accuracy when working with long sequences of characters in a reasoning exam.

[Q54] . (b) . South-East .

Explanation - Starting from Pune, the traveler goes 10 km East, then 5 km South, and finally 5 km back toward the West. This leaves the traveler at a final position that is 5 km East and 5 km South of the original starting point at Pune. The resulting direction relative to the start is therefore South-East, as it combines the southern and eastern displacements from the origin.

[Q55] . (b) . Exactly Opposite of B .

Explanation - By mapping the seating constraints, we find the circular order: H, C, E, D, B, F, A, and G. In this specific arrangement, H is positioned directly across from B on the opposite side of the circular table. This confirms that option (b) is the correct positional relationship based on the full logical deduction of all eight people's seats.

[Q56] . (c) . There are only six persons whose sitting positions can be exactly determined .

Explanation - This statement is incorrect because the information provided is sufficient to determine the exact seats of all eight individuals. By using the fixed positions of F, C, and H and applying the relative rules for E, D, and G, everyone can be placed. Since the logic allows for a full mapping, the claim that only six can be determined is the false statement in the set.

[Q57] . (d) . Four .

Explanation - The group includes D (father of A), A (father of F), and B (brother of a husband), along with F (who is a brother). Mapping the family tree reveals that D, A, B, and F are the four male members present within the described six-person unit. This satisfies the requirements of having two fathers and three brothers while identifying everyone by their gender and familial role.

[Q58] . (c) . Explanation .

Explanation - To complete the pattern, we must select the quadrant that maintains the circular and diagonal symmetry of the original figure. Option (c) provides the necessary mirrored lines and shapes to ensure that the four sections together form a unified, balanced image. This visual task tests the ability to recognize geometric patterns and understand how individual parts contribute to a symmetrical whole.

[Q59] . (c) . Explanation .

Explanation - When the paper is unfolded, the punched holes will be mirrored across the fold lines to create a symmetrical pattern. Option (c) correctly displays how the initial punch is duplicated and positioned once the triangular and rectangular folds are opened. This requires mental visualization of the folding process and the subsequent reflection of the cuts made in the paper.

[Q60] . (a) . Only I is strong .

Explanation - The first statement is a strong argument because it addresses a direct health risk based on scientific evidence of pollution levels. The second statement is weaker as it relies on an unverified duration and doesn't clearly link to the immediate danger as effectively as the first. Therefore, only the first assertion provides a compelling and logical reason to support the concerns raised about vehicular pollution and health.