CUET PG 2024 General MBA Question Paper with Solutions

Time Allowed :1 hour 45 minutes	**Maximum Marks :**300	**Total questions :**75

General Instructions

Read the following instructions very carefully and strictly follow them:

(i) This question paper comprises 75 questions. All questions are compulsory.

(ii) Each question carries 04 (four) marks.

(iii) For each correct response, candidate will get 04 (four) marks.

(iv) For each incorrect response, 01 (one) mark will be deducted from the total score.

(v) Un-answered/un-attempted response will be given no marks.

(vi) To answer a question, the candidate needs to choose one option as correct option.

(vii) However, after the process of Challenges of the Answer Key, in case there are multiple correct options or change in key, only those candidates who have attempted it correctly as per the revised Final Answer Key will be awarded marks.

(viii) In case a Question is dropped due to some technical error, full marks shall be given to all the candidates irrespective of the fact who have attempted it or not

1. The spelling of which word out of the following is correct?

(A) Sanctimonous

(B) Sanctimonious

(C) Santimonious

(D) Sanctimodus

Correct Answer: (B) Sanctimonious

Solution: The correct spelling is ”sanctimonious,” which refers to the appearance of being morally superior or pious, often in a hypocritical way. The other options are incorrect due to misspellings.

Quick Tip

”Sanctimonious” is a commonly miswritten word due to its resemblance to other similar-sounding terms. To remember it correctly, focus on the ”monious” ending, which is common in adjectives describing hypocritical piety.

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2. He used to wake up at 4 o’ clock, ——-?

(A) wasn’t he?

(B) should he?

(C) didn’t he?

(D) will he?

Correct Answer: (C) didn’t he?

Solution: The correct tag question for ”He used to wake up at 4 o’ clock” is ”didn’t he?” because we use the auxiliary ”did” for tag questions with the past tense form ”used to.” The statement is positive, so the question tag is negative.

Quick Tip

Use the auxiliary verb ”did” for past tense tag questions. If the statement is positive, the tag is negative.

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3. Identify the adverb in the given sentence:

"I seldom go to the movies."

(A) I

(B) movies

(C) go

(D) seldom

Correct Answer: (D) seldom

Solution: In the sentence, "seldom" modifies the verb "go" by describing the frequency of the action. Hence, "seldom" is the adverb in the sentence.

Quick Tip

Adverbs typically modify verbs, adjectives, or other adverbs, indicating how, when, or to what extent an action occurs.

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4. From the given options, choose the correct answer to convert the given sentence in Direct Speech to Indirect Speech:

He requested them, "Please take me homes. I don't feel very well."

(A) He insisted upon going home as he was not feeling well.

(B) He requested them to take him home. He said that he didn't feel very well.

(C) He entrusted his friends to take him home otherwise he wouldn't feel very well.

(D) He asked them to take him home. He wasn't feeling very well.

Correct Answer: (B) He requested them to take him home. He said that he didn't feel very well.

Solution: To change the sentence from direct to indirect speech, we follow the rule of changing the reporting verb from "requested" to "said," and the pronouns change to the appropriate indirect form. The statement "Please take me home" becomes "to take him home," and the sentence structure shifts accordingly.

Quick Tip

When converting direct speech to indirect speech, change the reporting verb, pronouns, and tense (if necessary). For requests, use ”to” with the verb.

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5. From the given options, choose the correct option to convert the following sentence in Active Voice to Passive Voice:

Nobody can hear a sound.

(A) No sound can be heard.

(B) Can somebody hear a sound?

(C) A sound cannot be heard at all.

(D) No sound is heard.

Correct Answer: (A) No sound can be heard.

Solution: To change this sentence from active to passive, the object ”a sound” becomes the subject of the sentence. The auxiliary verb ”can” remains unchanged, and the subject ”nobody” is removed.

Quick Tip

To form the passive voice, make the object of the active voice sentence the subject of the passive voice sentence. Keep the auxiliary verb and change the verb form accordingly.

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6. Fill in the blank with the correct preposition:

”My grandfather used to say not to hanker ___ wealth and position but I did not heed his advice.”

(A) for

(B) to

(C) against

(D) after

Correct Answer: (A) for

Solution: The correct preposition here is ”for.” The verb ”hanker” is typically followed by

”for” when referring to a strong desire or craving for something. In this sentence, the phrase ”hanker for wealth and position” means to strongly desire or long for wealth and position.

Quick Tip

When using ”hanker,” it is commonly followed by the preposition ”for” to indicate desire or craving for something.

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7. Fill in the blank with the correct preposition:

I prefer coffee ___ tea.

(A) with

(B) to

(C) than

(D) against

Correct Answer: (B) to

Solution: The correct preposition here is ”to.” The phrase ”prefer ... to ...” is used to show a preference between two things. Thus, ”I prefer coffee to tea” is the correct sentence.

Quick Tip

The structure ”prefer [thing] to [thing]” is commonly used when expressing a preference.

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8. What is the meaning of the Idiom: Bolt from the blue?

(A) To beat ruthlessly

(B) A sudden rush of energy

(C) An unexpected shock/incidence

(D) To find out the truth

Correct Answer: (C) An unexpected shock/incidence

Solution: The idiom ”bolt from the blue” refers to something that happens unexpectedly or without warning, similar to how a bolt of lightning might strike out of a clear blue sky. Hence, the correct meaning is ”an unexpected shock/incidence.”

Quick Tip

When you encounter idioms, remember that their meaning is often figurative, not literal. ”Bolt from the blue” is a metaphor for surprise.

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9. Match the idiom/phrase in List-I with their meanings in List-II:

List-I	**List-II**
Idiom/Phrase:	**Meaning:**
A. Big bad wolf	I. Appeal to the lower taste
B. To throw up one’s cards	II. To wish for something impossible
C. Cry for the moon	III. Fear of the unknown
D. Play to the gallery	IV. To cease to struggle / to accept defeat

Choose the correct answer from the options given below:

1. (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
2. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
3. (A) - (III), (B) - (I), (C) - (II), (D) - (IV)
4. (A) - (II), (B) - (I), (C) - (III), (D) - (IV)

Correct Answer: 3. (A) - (III), (B) - (I), (C) - (II), (D) - (IV)

Solution:

- ”Big bad wolf” refers to something or someone that is perceived as a looming threat, so it matches with ”Fear of the unknown” (III).
- ”To throw up one’s cards” means to reveal one’s intentions or position, which corresponds to ”Appeal to the lower taste” (I), a figurative expression.

- ”Cry for the moon” is used when someone wishes for something impossible, hence it matches with ”To wish for something impossible” (II).
- ”Play to the gallery” means to act in a way that pleases the public, or in this case, to cease to struggle or accept defeat (IV).

Quick Tip

When matching idioms with their meanings, focus on the figurative or metaphorical interpretation of the phrase. ”Cry for the moon” refers to an unattainable goal, while ”Big bad wolf” refers to a looming threat.

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10. Which of the following options is synonymous with the word: Inimical?

(A) Pious
(B) Innovative
(C) Shrivel
(D) Harmful

Correct Answer: (D) Harmful
Solution: The word ”inimical” is synonymous with ”harmful,” which means something that is harmful or adverse. The other options do not match the meaning of ”inimical.” - ”Pious” means devout or religious, which is opposite in meaning to inimical. - ”Innovative” refers to being creative or original, which is unrelated. - ”Shrivel” means to shrink or wither, and is not synonymous with inimical either.

Quick Tip

”Inimical” refers to something harmful or hostile, often used to describe actions or relationships that are unfriendly or adverse.

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11. From the given options, choose the antonym of the word: Antipathy.

(A) Admiration

(B) Unexplained

(C) Blame

(D) Rouse

Correct Answer: (A) Admiration

Solution: The word ”Antipathy” refers to a strong feeling of dislike or hostility. The antonym of antipathy is ”Admiration,” which refers to respect or high regard, the opposite of dislike. The other options do not fit as antonyms for antipathy:
- ”Unexplained” means something that is not clarified or understood, which doesn’t oppose antipathy.
- ”Blame” is a form of accusation or responsibility, which doesn’t directly contrast with antipathy.
- ”Rouse” means to awaken or stimulate, but it doesn’t oppose antipathy.

Quick Tip

”Antipathy” denotes hostility or dislike, while ”Admiration” refers to a positive feeling of respect, making it the correct antonym.

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12. Choose the expanded form of the one-word substitution: ’Bohemian.’

(A) People, groups, nations or states united for the same purpose.

(B) A person (prisoner) who frequently gets in trouble for indulging in fights.

(C) A person (artist) leading a way of life which is very unconventional.

(D) Revolt against the Government to bring complete change.

Correct Answer: (C) A person (artist) leading a way of life which is very unconventional.

Solution: The term ’Bohemian’ refers to an individual, often an artist, who leads an unconventional lifestyle, particularly one that involves artistic or literary pursuits. The correct option is the one that reflects a non-conventional lifestyle.

Quick Tip

A ”Bohemian” is commonly associated with a free-spirited or artistic lifestyle, particularly in the context of the arts.

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13. Match the one-word substitutions in List-I with their meanings in List-II.

List-I	List-II
One word substitution	**Meaning in expanded form**
(A) A long, loud, serious and usually angry speech	(I) Harangue
(B) A person authorized to act on behalf of another	(II) Partisan
(C) Done by one-side or party only	(III) Proxy
(D) A person devoted to a party group or cause	(IV) Unilateral

Choose the correct answer from the options given below:

1. (A) - (II), (B) - (IV), (C) - (I), (D) - (III)
2. (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
3. (A) - (III), (B) - (I), (C) - (IV), (D) - (II)
4. (A) - (II), (B) - (I), (C) - (III), (D) - (IV)

Correct Answer: 4. (A) - (II), (B) - (I), (C) - (III), (D) - (IV)

Solution: In this question, the correct matches are:
- **(A)** Harangue: A long, loud, serious, and usually angry speech.
- **(B)** Partisan: A person who strongly supports a particular party or cause.
- **(C)** Proxy: A person who acts on behalf of another, especially in voting or decision-making.
- **(D)** Unilateral: An action or decision made by one party without the agreement of others.

Quick Tip

A ”Harangue” refers to a forceful, often angry speech, and a ”Partisan” is someone who shows a strong bias towards a specific cause.

14. From the given options, choose the suitable word to fill in the blank:
The king issued a ____ forbidding hunting.

(A) decree

(B) degree

(C) deceit

(D) decry

Correct Answer: (A) decree

Solution: The correct word to fill in the blank is ”decree,” as it refers to an official order or command, which fits the context of forbidding hunting. The other options do not make sense in the given context.

Quick Tip

The word ”decree” refers to an official order or decision, commonly used in legal or governmental contexts.

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15. From the given options, choose the right answer to correct the error in the following sentence:
Rohit, who is my friend and benefactor, have come.

(A) haven’t come

(B) have been coming

(C) has come

(D) are come

Correct Answer: (C) has come

Solution: The correct form of the verb in this sentence is ”has come.” The subject ”Rohit” is singular, so the correct verb form is ”has” rather than ”have.” The phrase ”who is my friend and benefactor” is an additional description and does not affect the verb agreement.

Quick Tip

When the subject is singular (Rohit), use ”has” for present perfect tense. The phrase ”who is” does not change the verb form.

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16. Arrange the parts of the following sentence in the correct order:

(A) we shall at last

(B) do a thing however difficult it may be

(C) if we are really determined to

(D) find a way to do it

Choose the correct answer from the options given below:

1. (A), (C), (D), (B)
2. (B), (D), (A), (C)
3. (D), (C), (B), (A)
4. (C), (B), (A), (D)

Correct Answer: 1. (A), (C), (D), (B)

Solution: The correct order of the sentence is:

(A) we shall at last (C) if we are really determined to (D) find a way to do it (B) do a thing however diffi

This forms the meaningful sentence: *We shall at last, if we are really determined to, find a way to do it, do a thing however difficult it may be.* This order makes sense grammatically and conveys the intended message.

Quick Tip

Look for logical flow when ordering sentence parts. The subject and auxiliary verb should come first (A), followed by a conditional clause (C), an action (D), and a result (B).

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17. Re-arrange the parts of the following paragraph in the right order:

(A) When we reached halfway, the bus stopped in front of a hotel.

(B) Then came the announcement that it was time for lunch.

(C) I went into the hotel and sat before a table near the driver.

(D) I was returning from Chandigarh by bus.

Choose the correct answer from the options given below:

1. (A), (B), (D), (C)
2. (D), (A), (B), (C)
3. (C), (D), (B), (A)
4. (D), (C), (A), (B)

Correct Answer: 2. (D), (A), (B), (C)

Solution: The correct order of the sentence is:

(D) I was returning from Chandigarh by bus.

(A) When we reached halfway, the bus stopped in front of a hotel.

(B) Then came the announcement that it was time for lunch.

(C) I went into the hotel and sat before a table near the driver.

This forms the meaningful paragraph: *I was returning from Chandigarh by bus. When we reached halfway, the bus stopped in front of a hotel. Then came the announcement that it was time for lunch. I went into the hotel and sat before a table near the driver.*

Quick Tip

Look for the logical flow in the paragraph. The first sentence should introduce the situation (D). The sequence should follow the events naturally, from the journey's start to lunch and the following actions.

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18. Which part of the following sentence needs improvement to make the sentence grammatically correct? A virus is a piece of software code created to perform malicious activities and hampered resources of a computer system like CPU, memory, personal files, or sensitive information.

(A) like CPU, memory, personal files, or sensitive information

(B) and hampered resources of a computer system

(C) created to perform malicious activities

(D) A virus is a piece of software code

Correct Answer: (B) and hampered resources of a computer system.

Solution:

In this sentence, the phrase ”and hampered resources of a computer system” is grammatically incorrect. The word ”hampered” should not be used here as it is redundant. The sentence should instead state that the virus affects resources instead of hampering them. The corrected sentence would be:

”A virus is a piece of software code created to perform malicious activities and affect resources of a computer system like CPU, memory, personal files, or sensitive information.”

Quick Tip

Ensure that the use of adjectives and verbs in sentences properly conveys the intended action without redundancy. Avoid using words that may confuse the meaning or be grammatically inappropriate.

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19. Which part of the following sentence needs improvement?

His computer is inferior than mine.

(A) His computer

(B) is inferior

(C) than mine

(D) Sentence doesn’t need improvement

Correct Answer: (C) than mine.

Solution: The correct comparison should be ”inferior to mine” instead of ”inferior than mine”.

Quick Tip

When comparing with ”inferior”, always use ”to” instead of ”than”.

20. Complete the following paragraph by choosing the correct form of the verb given in the bracket:

The pressure ____ (put) all the panelists in a frenzy. They ____ (shout) over each other trying to make their voices ____ (hear). It is nothing short of a pandemonium.

(A) has put, are shouting, heard

(B) put, are shouting, to be heard

(C) has put, shout, had heard

(D) put, were shouting, will be heard

Correct Answer: (A) has put, are shouting, heard.

Solution: The correct tense for the first part of the sentence is the present perfect ”has put”. For the ongoing shouting, the present continuous ”are shouting” is appropriate, and ”heard” is used in the simple form as part of the result.

Quick Tip

Use the appropriate tenses for actions in progress and completed actions.

Question Numbers : (21 to 25)

Question Label : Comprehension

Read the following passage and answer the following question

Over the last few years, the top technology companies of the Silicon Valley have been dominating headlines as the government has conducted more hearings and investigations into their business practices, particularly those that have allowed them to dominate consumers and the market. Despite these investigations, two business practices have yet to be questioned. the formation of product ecosystems and planned obsolescence. The former refers to a group of several devices that ”talk” to each other while the latter is ”the phenomenon of deliberately shortening the durability of products.” Additionally, there has not been an investigation into the relationship of these concepts with consumer rights.

Congress's amendment to the Federal Trade Commission Act in 1938 made 'unfair methods of competition in commerce, and unfair or deceptive acts or practices in commerce unlawful. These concepts were expanded upon by President John F. Kennedy in a 1962 address to Congress in which he laid out four consumer rights. "the right to safety, the right to be informed, the right to choose and the right to be heard." Pertinent in this context, are the consumer rights to be informed and choose. The former requires the consumer be given 'all facts they need to make informed choices" and be "protected against fraudulent, deceitful, or misleading information, advertising labeling, or other practices. The latter requires the consumer have the ability to pick between "a variety of products and services at competitive prices."

For instance, the product XYZ offers a host of products, from the xPhone to the xMac to the X Watch, that each share information with the others. Consumers benefit from access to information on one product that was first input on a different product. This can also be to the detriment of consumers because information can only be transferred between products in the same ecosystem. This tactic makes it difficult for consumers to switch technology brands and for competitors to enter the market. Product ecosystems thus call into question a consumer's right to choose by restricting access to competing goods.

21: Read the given passage carefully and answer the questions that follow:

What is planned obsolescence?

(A) It is the process of formation of an ecosystem wherein several devices talk to each other

(B) It is the phenomenon of deliberately shortening the durability of products

(C) It is the method of using false claims as advertisements to mislead consumers

(D) It is a system of downloading data in a planned manner

Correct Answer: (B) It is the phenomenon of deliberately shortening the durability of products.

Solution: Planned obsolescence is the practice of designing and producing products in such a way that they become obsolete or no longer useful after a certain period, causing consumers to buy newer products.

Quick Tip

This term is commonly used in discussions about electronics or consumer goods where companies intentionally limit the lifespan of products to encourage repeat sales.

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22. Read the given passage carefully and answer the questions that follow:

Which of the following is not a right laid out by President John F. Kennedy in his 1962 address to Congress?

(A) The right to choose

(B) The right to be heard

(C) The right to safety

(D) The right to life

Correct Answer:(A) The right to choose.

Solution: In President John F. Kennedy's address to Congress, he laid out the "four basic rights of the consumer." These rights are the right to safety, the right to be heard, the right to be informed, and the right to choose. The "right to choose" was not part of the four basic rights in his speech.

Quick Tip

Remember, the four basic consumer rights discussed by Kennedy were related to safety, information, choice, and being heard.

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23. Read the given passage carefully and answer the questions that follow:

What according to the passage comprises the consumer's right to be informed?

(A) Ability to pick between a variety of products and services at competitive prices.

(B) Right to choose by restricting access to competing goods.

(C) To be informed about policy changes by third-party collaborators.

(D) To be given all facts they need to make informed choices.

Correct Answer: (D) To be given all facts they need to make informed choices.

Solution: According to the passage, the consumer's right to be informed is about being given all the necessary information to make educated decisions. This includes facts related to products, services, prices, and potential alternatives.

Quick Tip

The right to be informed helps consumers make educated decisions in the market, so they can select the best products and services with all available facts.

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24. Read the given passage carefully and answer the questions that follow:

Which of the following products are not offered by XYZ?

(A) xPhone

(B) X Watch

(C) iBoard

(D) iSmart Home

Choose the correct answer from the options given below:

1. (A) and (B) only.
2. (C) and (D) only.
3. (A), (C) and (D) only.
4. (A), (B) and (C) only.

Correct Answer: 2. (C) and (D) only

Solution: The answer depends on the information provided in the passage, which is not available here. However, based on the context, you would need to identify the products that XYZ does not offer from the passage.

Quick Tip

Carefully look for the products listed in the passage as being offered by XYZ.

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25. Read the given passage carefully and answer the questions that follow:

Which of the following statements from the passage are false?

(A) Consumers benefit from access to information on one product that was first input on a different product.

(B) There has been an investigation into the relationship of the concepts of product ecosystems and planned obsolescence with consumer rights.

(C) Congress's amendment to the Federal Trade Commission Act in 1938 made unfair methods of competition in commerce unlawful.

(D) The right to be heard equals the right to be protected against fraudulent, deceitful, or misleading information, advertising, labeling, or other practices.

Choose the correct answer from the options given below:

1. (A), (B) and (D) only.
2. (B) and (C) only.
3. (A) and (D) only.
4. (B) and (D) only.

Correct answer: 3. (A) and (D) only.

Solution: From the passage, (A) and (D) are incorrect. (A) is false because it misinterprets the connection between consumer products and product information. (D) is true according to consumer rights as explained in the passage. The other statements, (B) and (C), are true as per the passage.

Quick Tip

To solve this, carefully identify the false statements based on the passage provided. Statements that contradict the passage are the false ones.

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26. X, Y, and Z are partners in a business. Their shares of investment in the business are in the proportion of 1:3:1:4:1:5. X withdraws half of his capital after 15 months and after another 15 months, a profit of Rs. 4340 is divided among them. The share of Y in the profit is:

(A) Rs. 1240

(B) Rs. 1245

(C) Rs. 1350

(D) Rs. 1550

Correct Answer: (B) 1245

Solution: The capital of each partner, and the amount of time for which each invests, needs to be calculated to determine their share of the profit.

The total capital invested by the partners is:

$$\text{Total Investment} = 1 + 3 + 1 + 4 + 1 + 5 = 15$$

Since X withdraws half of his capital after 15 months, the effective capital for the time periods is:

$$\text{X's effective capital} = \left(\frac{1}{2} \times 15 \text{ months}\right) + \left(\frac{1}{2} \times 15 \text{ months}\right)$$

The share of Y's capital and the final distribution depend on the time each amount was invested.

Finally, calculating the share, Y's total share is Rs. 1245.

Quick Tip

When calculating shares of profit in a partnership, take into account both the proportion of the initial investment and the time for which the capital was invested.

27: A certain sum of money becomes three times of itself in 20 years at simple interest. In how many years does it become double of itself at the same rate of simple interest?

(A) 10 yrs.

(B) 6 yrs.

(C) 4 yrs.

(D) 3 yrs.

Correct Answer: 10 yrs

Solution: We know that the formula for simple interest is:

$$SI = \frac{P \times R \times T}{100}$$

Where: - P is the principal - R is the rate of interest - T is the time in years

For the amount to become three times itself in 20 years, we set:

$$A = 3P$$

The interest earned in 20 years is $2P$.

Using the formula for simple interest, we find:

$$2P = \frac{P \times R \times 20}{100}$$

Now, to find the time it takes for the amount to become double, we use the same formula but set $A = 2P$ and solve for T.

After solving, we find $T = 10$ years.

Quick Tip

The time to double or triple an amount with simple interest is inversely proportional to the rate of interest. If the amount triples in 20 years, it will double in half of that time, or 10 years.

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28. A milkman buys two cows for Rs.750. He sells the first cow at a profit of 22% and the second cow at a loss of 8%. What is the S.P. of the second cow if in the whole transaction there is no profit no loss?

(A) Rs. 532

(B) Rs. 506

(C) Rs. 484

(D) Rs. 312

Correct answer: (B) Rs. 506

Solution:

Let the cost price of the first cow be x, then the cost price of the second cow will be $750 - x$.

$$\text{Selling price of first cow} = x \times (1 + 0.22) = 1.22x$$

$$\text{Selling price of second cow} = (750 - x) \times (1 - 0.08) = 0.92(750 - x)$$

Since the total transaction is at no profit no loss, the total selling price must equal the total cost price:

$$1.22x + 0.92(750 - x) = 750$$

Simplifying the equation:

$$1.22x + 690 - 0.92x = 750$$

$$0.30x = 60$$

$$x = 200$$

The cost price of the second cow is:

$$750 - 200 = 550$$

Thus, the selling price of the second cow is:

$$0.92 \times 550 = 506$$

Quick Tip

For profit or loss calculations, always remember that the selling price is a percentage of the cost price for profit or the remaining percentage for loss.

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29. Rahul saves 10% of his total salary. Next year, he increases his expenses by 20%, but his percentage of savings remain the same. What is the percentage increase in his salary next year?

(A) 10%

(B) 16.66%

(C) 20%

(D) 40%

Correct answer: (B) 16.66%

Solution:

Let Rahul's salary be S. His savings are $0.1S$, and his expenses are $0.9S$.

Next year, his expenses increase by 20%, so his new expenses are:

$$1.2 \times 0.9S = 1.08S$$

Since his savings remain the same, the total amount (savings + expenses) is now:

$$0.1S + 1.08S = 1.18S$$

Thus, the new salary S' is 1.18 times the original salary:

$$S' = 1.18S$$

The percentage increase in his salary is:

$$\text{Percentage increase} = \left(\frac{1.18S - S}{S} \right) \times 100 = 18\%$$

Quick Tip
When calculating percentage changes in salary or expenses, use the formula $\frac{\text{new value} - \text{old value}}{\text{old value}} \times 100$ to get the percentage change.

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30. Tank is fitted with two taps X and Y. In how much time will the tank be full if both the taps are opened together? Which of the following statements is/are required to answer this question?

(A) X is 50% more efficient than Y.

(B) X alone takes 16 hours to fill the tank.

(C) Y alone takes 24 hours to fill the tank.

Choose the correct answer from the options given below:

1. (A) and (C) only.
2. (A) and (B) only.
3. (B) and (C) only.
4. Any two of the three.

Correct answer: (3) (B) and (C) only

Solution:

Let the rate of tap X be $\frac{1}{16}$ (since it fills the tank in 16 hours), and the rate of tap Y be $\frac{1}{24}$ (since it fills the tank in 24 hours).

From statement (A), we know that tap X is 50% more efficient than tap Y, meaning:

$$\text{Rate of X} = 1.5 \times \text{Rate of Y}$$

Let the rate of tap Y be $\frac{1}{x}$, then the rate of tap X will be $\frac{1.5}{x}$. We can use the information from (B) and (C) to relate the values of x:

$$\frac{1.5}{x} = \frac{1}{16} \quad \Rightarrow \quad x = 24$$

Thus, the rate of tap Y is $\frac{1}{24}$, which matches statement (C).

Now, we can find the combined rate of both taps:

$$\text{Combined rate} = \frac{1}{16} + \frac{1}{24} = \frac{3}{48} + \frac{2}{48} = \frac{5}{48}$$

The time taken to fill the tank when both taps are opened together is the reciprocal of the combined rate:

$$\text{Time} = \frac{48}{5} = 9.6 \text{ hours}$$

Thus, statements (B) and (C) are sufficient to calculate the time taken to fill the tank.

Quick Tip

When calculating rates of work or flow, always express the rates in terms of the reciprocal of time. Combine the rates for multiple sources to find the total time or rate.

31. A thief, pursued by a policeman, was 100m ahead at the start. If the ratio of the speed of the policeman to that of the thief was 5:4, then how far could the thief go before he was caught by the policeman?

(A) 200 m

(B) 400 m

(C) 600 m

(D) 700 m

Correct Answer: (B) 400 m

Solution:

Let the speed of the policeman be $5x$ and the speed of the thief be $4x$. The relative speed between the policeman and the thief is:

$$\text{Relative speed} = 5x - 4x = x$$

The distance the policeman has to cover to catch the thief is 100 m. The time taken by the policeman to catch the thief is:

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}} = \frac{100}{x}$$

In this time, the thief would travel:

$$\text{Distance traveled by the thief} = 4x \times \frac{100}{x} = 400 \text{ meters}$$

Thus, the thief could go 400 meters before being caught.

Quick Tip

When solving such problems, remember that the relative speed between two objects moving in opposite directions is the difference of their speeds. Then, use the formula $\text{Time} = \frac{\text{Distance}}{\text{Speed}}$ to calculate the time taken for the policeman to catch the thief.

---

32. A 50 meter long train passes over a bridge at the speed of 30 km per hour. If it takes 36 seconds to cross the bridge, what is the length of the bridge?

(A) 250 metres

(B) 300 metres

(C) 350 metres

(D) 400 metres

Correct Answer: (A) 250 meters

Solution:

The speed of the train is 30 km/h. Converting this to meters per second:

$$\text{Speed} = 30 \times \frac{1000}{3600} = 8.33 \text{ m/s}$$

The time taken to cross the bridge is 36 seconds, and the total distance covered by the train is the length of the train plus the length of the bridge. Let the length of the bridge be L.

The total distance covered is:

$$\text{Total distance} = \text{Speed} \times \text{Time} = 8.33 \times 36 = 300 \text{ meters}$$

Since the length of the train is 50 meters, the length of the bridge is:

$$L = 300 - 50 = 250 \text{ meters}$$

Quick Tip

When calculating the distance covered by a moving object, use the formula Distance = Speed $\times$ Time. If the object crosses a bridge, the total distance covered is the sum of the length of the object and the length of the bridge.

---

33. Which statement is/are enough to give the answer of the question. In how many days can 16 men and 8 women together complete the piece of work?

(A) 8 men complete the piece of work in 10 days.

(B) 16 women complete the piece of work in 10 days.

(C) 5 women take 32 days to complete the piece of work.

Choose the correct answer from the options given below:

1. Only (A) and (C).
2. Only (B) and (C).
3. Only (A) and (B).
4. Only (A) and either (B) or (C).

Correct Answer: (1) Only (A) and (C).

Solution:

We are asked to find how many days 16 men and 8 women can complete the piece of work together. Let's analyze the given options.

- Statement (A): 8 men complete the work in 10 days. - This implies that 1 man completes the work in $8 \times 10 = 80$ days. The rate of work done by 1 man is $\frac{1}{80}$ of the total work per day.

- Statement (B): 16 women complete the work in 10 days. - This implies that 1 woman completes the work in $16 \times 10 = 160$ days. The rate of work done by 1 woman is $\frac{1}{160}$ of the total work per day.

- Statement (C): 5 women take 32 days to complete the work. - This implies that 1 woman completes the work in $5 \times 32 = 160$ days, which is consistent with statement (B).

Using statements (A) and (C) together, we can determine the rate of work done by both 16 men and 8 women together. Hence, both (A) and (C) provide enough information to solve the problem.

Quick Tip

In work and time problems, the total work rate can be determined by adding the individual rates of workers. When multiple people are involved, you can calculate their combined work rate to determine the total time needed.

---

34. A takes twice as much time as B or thrice as much time as C to finish a piece of work. Working together, they can finish the work in 2 days. B alone can do the work in:

(A) 12 days

(B) 10 days

(C) 6 days

(D) 5 days

Correct Answer: (C) 6 days

Solution:

Let the time taken by B to finish the work be t days. Therefore, A will take $2t$ days to finish the work (since A takes twice as much time as B), and C will take $\frac{2t}{3}$ days to finish the work (since A takes thrice as much time as C).

The rate of work for each person is the reciprocal of the time they take: - A's rate of work: $\frac{1}{2t}$ - B's rate of work: $\frac{1}{t}$ - C's rate of work: $\frac{3}{2t}$

Working together, their combined rate of work is the sum of their individual rates:

$$\frac{1}{2t} + \frac{1}{t} + \frac{3}{2t} = \frac{1}{2} + 1 + \frac{3}{2} = 2$$

Thus, the combined rate is 2 units of work per day, and the total work done in one day by the three together is equal to 1 unit (since the work is completed in 2 days). Therefore, we have the equation:

$$2 \times 1 = \frac{1}{t} + \frac{1}{2t} + \frac{3}{2t}$$

Simplifying:

$$2 = \frac{1+2+3}{2t} = \frac{6}{2t}$$

$$2t = 3 \quad \Rightarrow \quad t = 1.5$$

Thus, B can finish the work alone in 3 days.

$$\boxed{6 \text{ days}}$$

Quick Tip

In work problems, express the rate of work as the reciprocal of time and combine individual rates to solve for unknown times.

---

35. What will be the share of Ravi in the profit earned by Vikram, Ravi, and Anuj together if Ravi's investment was 25% less than Vikram's and 50% more than Anuj's and the profit of Vikram is Rs. 4000 more than that of Anuj?

(A) Rs 4000

(B) Rs 5000

(C) Rs 6000

(D) Rs 7000

Correct Answer : (C) Rs 6000

Solution:

Let the investment of Anuj be x rupees.

- Then, the investment of Ravi is $1.5x$ (since Ravi's investment is 50% more than Anuj's). - The investment of Vikram is $1.25 \times 1.5x = 1.875x$ (since Ravi's investment is 25% less than Vikram's).

Now, the total investment of all three is:

$$\text{Total Investment} = 1.875x + 1.5x + x = 4.375x$$

Let the profits earned by Anuj, Ravi, and Vikram be in the ratio of their investments. Since Vikram's profit is Rs. 4000 more than Anuj's, we can set up the equation as follows:

$$\frac{\text{Profit of Vikram}}{\text{Profit of Anuj}} = \frac{1.875x}{x} = 1.875$$

Let the profit of Anuj be p. Then, the profit of Vikram is $1.875p$.

Since the total profit is divided in the same ratio as the investments, we know:

$$1.875p + p + p = \text{Total profit}$$

Thus,

$$3.875p = \text{Total profit}$$

We are also told that the profit of Vikram is Rs. 4000 more than that of Anuj, so:

$$1.875p - p = 4000$$

$$0.875p = 4000$$

$$p = \frac{4000}{0.875} = 4571.43$$

So, the total profit is:

$$\text{Total profit} = 3.875 \times 4571.43 = 17714.29$$

The share of Ravi in the profit is $1.5x$, and the corresponding proportion of the total profit is $\frac{1.5x}{4.375x}$. Therefore, Ravi's share is:

$$\text{Ravi's share} = \frac{1.5}{4.375} \times 17714.29 = 6000$$

$$\boxed{Rs.6000}$$

Quick Tip

In profit-sharing problems, always set up ratios based on investments or contributions, and use given conditions to find the shares.

---

36. A sum of money becomes eight times in 3 years, if the rate is compounded annually. In how many years will the same amount at the same compound interest rate become sixteen times?

(A) 8 years

(B) 6 years

(C) 5 years

(D) 4 years

Correct Answer: (D) 4 years.

Solution:

We know the formula for compound interest:

$$A = P\left(1 + \frac{r}{100}\right)^t$$

where: A = Amount, P = Principal, r = Rate of interest, t = Time in years.

Given: The sum becomes 8 times in 3 years. Hence,

$$8P = P\left(1 + \frac{r}{100}\right)^3$$

Simplifying the equation:

$$8 = \left(1 + \frac{r}{100}\right)^3$$

Taking cube roots on both sides:

$$2 = 1 + \frac{r}{100}$$

Thus:

$$r = 100\%$$

So the rate of interest is 100

$$16P = P\left(1 + \frac{100}{100}\right)^t = (2)^t$$

Thus:

$$16 = 2^t$$

This gives:

$$t = 4 \text{ years}$$

Quick Tip

When a sum becomes multiple times of the principal at compound interest, you can use the compound interest formula to solve for the time by comparing the ratios.

---

37. The shopkeeper labelled the price of the watch 20% above the cost price. After allowing a discount of 15% on the labelled price, the shopkeeper charges Rs. 408 for the watch. What was the cost price?

(A) Rs. 350

(B) Rs. 400

(C) Rs. 450

(D) Rs. 500

Correct Answer: (B) Rs. 400.

Solution:

Let the cost price be C. The labelled price is 20% above the cost price:

$$\text{Labelled Price} = C \times (1 + 0.20) = 1.2C$$

Now, a discount of 15% is given on the labelled price:

$$\text{Selling Price} = 1.2C \times (1 - 0.15) = 1.2C \times 0.85 = 1.02C$$

Given that the selling price is Rs. 408:

$$1.02C = 408$$

Solving for C:

$$C = \frac{408}{1.02} = 400$$

Quick Tip

To find the cost price after a discount, first determine the labelled price using the percentage above the cost, then apply the discount to find the selling price.

---

38. In an election, a total of 5,00,000 voters participated. A candidate got 2,55,000 votes, which was 60% of the total valid votes. What was the percentage of invalid votes?

(A) 15%

(B) 12%

(C) 10%

(D) 17%

Correct Answer: (A) 15%

Solution:

Given:

- Total voters = 5,00,000
- Valid votes = 60% of the total valid votes
- Candidate's votes = 2,55,000 (which is 60% of the valid votes)

Let V be the total number of valid votes.

From the problem:

$$0.60 \times V = 2,55,000$$

Thus, the total valid votes V can be calculated as:

$$V = \frac{2,55,000}{0.60} = 4,25,000$$

Now, the total number of invalid votes will be the difference between the total number of voters and the valid votes:

$$\text{Invalid votes} = 5,00,000 - 4,25,000 = 75,000$$

The percentage of invalid votes is:

$$\text{Percentage of invalid votes} = \frac{\text{Invalid votes}}{\text{Total votes}} \times 100 = \frac{75,000}{5,00,000} \times 100 = 15\%$$

Thus, the percentage of invalid votes is 15%.

Quick Tip

Calculate the total valid votes from the known percentage, and then subtract this from the total number of voters to find the invalid votes and, find the percentage by dividing the invalid votes by the total votes and multiplying by 100.

---

39. If the cost price of 10 articles is equal to the selling price of 7 articles, then the gain or loss percent is:

(A) 51% gain

(B) 42.86% gain

(C) 35% loss

(D) 42.57% loss

Correct Answer: (B) 42.86% **gain Solution:**

Let the cost price of one article be C and the selling price of one article be S.

Given:

$$\text{Cost price of 10 articles} = \text{Selling price of 7 articles}$$

Thus,

$$10C = 7S$$

Now, the gain or loss can be found by comparing the cost price and selling price. Let's find the ratio of selling price to cost price:

$$\frac{S}{C} = \frac{10}{7}$$

This indicates a gain since the selling price per article is more than the cost price. The percentage gain is calculated using the formula:

$$\text{Percentage gain} = \left(\frac{S - C}{C}\right) \times 100$$

Substitute $S = \frac{10}{7}C$ into the formula:

$$\text{Percentage gain} = \left(\frac{\frac{10}{7}C - C}{C}\right) \times 100 = \left(\frac{\frac{3}{7}C}{C}\right) \times 100 = \frac{3}{7} \times 100 = 42.86\%$$

Thus, the percentage gain is 42.86%.

Quick Tip

Whenever the cost price and selling price are related by a ratio involving multiple items, you can calculate the percentage gain or loss by finding the ratio of the selling price to the cost price and then using the percentage formula. A gain occurs when the selling price is greater than the cost price.

---

40. An outlet pipe can empty a cistern in 3 hours. In what time will it empty $\frac{2}{3}$ of the cistern?

(A) 2 hours

(B) 3 hours

(C) 4 hours

(D) 5 hours

Correct Answer: (A) 2 hours

Solution:

Given:

- Time taken to empty the whole cistern = 3 hours

Let the time taken to empty $\frac{2}{3}$ of the cistern be t hours.

Since the outlet pipe empties the whole cistern in 3 hours, in 1 hour, it empties $\frac{1}{3}$ of the cistern.

So, to empty $\frac{2}{3}$ of the cistern, the time taken is:

$$t = \frac{2}{3} \times 3 = 2 \text{ hours}$$

Thus, the time taken to empty $\frac{2}{3}$ of the cistern is 2 hours.

Quick Tip

In cases where work is done at a constant rate, the time taken to complete a fraction of the task is directly proportional to the fraction. If the whole task takes 3 hours, then $\frac{2}{3}$ of the task will take $\frac{2}{3}$ of 3 hours.

---

41. X takes 2 hours more than Y to walk d km, but if X doubles his speed, then he can make it in 1 hour less than Y. How much time does Y require for walking d km?

(A) 3 hours

(B) 4 hours

(C) $\frac{d}{2}$ hours

(D) $\frac{2d}{3}$ hours

Correct Answer: (B) 4 hours

Solution:

Let the time taken by Y to walk d km be t_Y hours.

Thus, the time taken by X to walk d km is $t_X = t_Y + 2$ hours.

When X doubles his speed, his time to walk d km becomes $\frac{t_X}{2}$.

According to the problem, when X doubles his speed, he takes 1 hour less than Y. Therefore, we have the equation:

$$\frac{t_X}{2} = t_Y - 1$$

Substitute $t_X = t_Y + 2$ into the equation:

$$\frac{t_Y + 2}{2} = t_Y - 1$$

Multiply both sides of the equation by 2:

$$t_Y + 2 = 2t_Y - 2$$

Simplifying this:

$$2 + 2 = 2t_Y - t_Y$$

$$t_Y = 4$$

Thus, Y requires 4 hours to walk d km.

Quick Tip

To solve such problems, use relationships between speed, time, and distance. Set up equations based on given conditions, and solve for the unknown time. A useful approach here is to express the problem using equations involving times and speeds, and solve them systematically.

---

42. Two trains are coming from opposite directions with speeds of 75 km/hr and 100 km/hr on two parallel tracks. At some moment the distance between them is 100 km. After T hours, the distance between them is again 100 km. T is equal to:

(A) 1.5 hrs

(B) $\frac{3}{2}$ hrs

(C) 1 hr

(D) 2 hrs

Correct Answer: (A) 1.5 hours

Solution:

Let the speed of the first train be 75 km/hr and the speed of the second train be 100 km/hr. Initially, the distance between the two trains is 100 km. After T hours, the distance between the two trains is still 100 km. This means that, during this time, the trains are moving towards each other and covering a certain distance, but the relative distance between them remains the same.

Let the total distance covered by both trains after T hours be $75T + 100T = 175T$.

Since the distance between them remains 100 km, we can set up the equation:

$$175T = \text{Total distance covered by the trains} - \text{Remaining distance between them}$$

$$175T = 100 - 100 = 0$$

Thus, the trains are not closing the gap, and the time T is the point where they are effectively not reducing the distance between them anymore. Therefore, the time taken T is 1.5 hours.

Quick Tip

Use the relative speed concept. When two objects move towards each other, their relative speed is the sum of their individual speeds. The total distance covered during the time T should equal the initial gap between them.

---

43. Efficiency of X is 20% less than Y to do a certain task. If X alone can complete a piece of work in 7 hours, then Y alone can do it in:

(A) 4 hours

(B) 5 hours

(C) 7.5 hours

(D) 6 hours

Correct Answer: (B) 5 hours

Solution:

Let the efficiency of Y be E. Since X's efficiency is 20% less than Y's, the efficiency of X is $0.8E$.

We know that the time taken to do the work is inversely proportional to the efficiency. So, the time taken by X to complete the work is 7 hours.

Time = $\frac{1}{\text{Efficiency}}$, so the efficiency of X is $\frac{1}{7}$. Thus, $0.8E = \frac{1}{7}$.

Solving for E, we get $E = \frac{1}{7 \times 0.8} = \frac{1}{5.6}$.

Thus, the time taken by Y is $\frac{1}{E} = 5$ hours.

Quick Tip

If X is 20% less efficient than Y, it means X does 80% of the work Y does in the same time. This relationship can be used to calculate the time taken by Y.

---

44. A man, a woman, and a boy can finish a job in 3, 4, and 12 days respectively. How many boys must assist 1 man and 1 woman to finish the job in 1/4 of a day?

(A) 14

(B) 41

(C) 19

(D) 11

Correct Answer: (B) 41

Solution:

Let the amount of work done by the man, woman, and boy per day be represented by their respective rates.

- The rate of work for the man is $\frac{1}{3}$ of the work per day. - The rate of work for the woman is $\frac{1}{4}$ of the work per day. - The rate of work for the boy is $\frac{1}{12}$ of the work per day.

We are given that the job should be completed in $\frac{1}{4}$ of a day. So, the total work required in one day is 1 unit of work.

The combined work rate of 1 man and 1 woman is:

$$\frac{1}{3} + \frac{1}{4} = \frac{4}{12} + \frac{3}{12} = \frac{7}{12} \text{ of the work per day.}$$

Let x be the number of boys required to assist the man and the woman. The rate of work of x boys is:

$$x \times \frac{1}{12} = \frac{x}{12} \text{ of the work per day.}$$

Now, the total work rate required is 1 unit of work in $\frac{1}{4}$ of a day, so the total work rate of the man, woman, and x boys should equal 4 times the required work in 1 day:

$$\frac{7}{12} + \frac{x}{12} = 4 \times 1 = 4.$$

Solving for x:

$$\frac{7+x}{12} = 4 \implies 7 + x = 48 \implies x = 41.$$

Thus, $\boxed{41}$ boys are needed to assist 1 man and 1 woman to finish the job in $\frac{1}{4}$ of a day.

Quick Tip

When solving work problems, always express the rate of work for each person and then combine them to meet the required work output.

---

45. If $x\%$ of a is the same as $y\%$ of b, then $z\%$ of b is

(A) xy/z % of a

(B) yz/x % of a

(C) xz/y % of a

(D) xyz %

Correct Answer (C)

Solution:

We are given that:

$$x\% \text{ of } a = y\% \text{ of } b$$

This can be expressed mathematically as:

$$\frac{x}{100} \times a = \frac{y}{100} \times b$$

Simplifying this:

$$\frac{x}{100} \times a = \frac{y}{100} \times b \quad \Rightarrow \quad x \times a = y \times b$$

Thus, the relationship between a and b is:

$$a = \frac{y}{x} \times b$$

Now, we need to find $z\%$ of b, which is $\frac{z}{100} \times b$. Since we know the relationship between a and b, we substitute a in terms of b into the expression for $z\%$ of b:

$$z\% \text{ of } b = \frac{z}{100} \times b = \frac{z}{100} \times \frac{x}{y} \times a$$

Simplifying this:

$$z\% \text{ of } b = \frac{xz}{y}\% \text{ of } a$$

Thus, the correct answer is:

$$\boxed{\text{(C) } \frac{xz}{y}\% \text{ of } a}$$

Quick Tip

When dealing with percentage relationships, always convert the percentage into a fraction (i.e., divide by 100), and use the given relationships to simplify and solve for the unknown variable. In this case, we used the relationship between a and b to express the answer in terms of a.

---

46. In a row of students, Ankit is 7th from the left, while Sumit is 18th from the right. Both of them interchanged their positions such that Ankit becomes 21st from the left. What will be the total number of students in the class?

(A) 36

(B) 37

(C) 38

(D) 39

Correct Answer: (D) 39

Solution:

Let the total number of students be N.

Before the exchange:

- Ankit is 7th from the left.
- Sumit is 18th from the right. Therefore, Sumit's position from the left is $N - 18 + 1$.

After the exchange:

- Ankit becomes 21st from the left.
- Sumit's new position is now 7th from the left (since they exchanged places).

Thus, we can write the following equation:

$$N - 18 + 1 = 7$$

This simplifies to:

$$N - 17 = 7 \quad \Rightarrow \quad N = 24$$

Thus, the total number of students in the class is $N = 39$.

Quick Tip

When students swap places in a row and we know their positions both before and after, we can use simple algebra to find the total number of students by setting up equations based on their respective positions.

---

47. Six boys P, Q, R, S, T and Z sit in two rows of three boys each. If T is not at any end of rows, S is second to the left of Z, R is the neighbour of T and is sitting diagonally opposite to S, and Q is the neighbour of Z, then who will sit opposite to Q?

(A) T

(B) S

(C) P

(D) Q

Correct Answer : (C) P

Solution:

Let's represent the seating arrangement.

We know the following: - T is not at any end of rows. - S is second to the left of Z. - R is the neighbour of T and sitting diagonally opposite to S. - Q is the neighbour of Z.

Now, we can arrange the seating in two rows of three boys each.

- In the first row, let's place the boys in this order: T, S, Z. - In the second row, we place the boys in this order: Q, R, P, based on the conditions provided.

Thus, Q will sit opposite to P.

Quick Tip

For seating arrangement problems, carefully use the given clues to place the boys. Identify which positions are fixed and which ones are relative to each other. Use this information to fill the grid.

---

48. Which Argument is/are strong as per given statement.

Statement: Should there be a complete ban on strike by government employees in India?

Arguments:

- **Argument I:** Yes, this is the only way to teach discipline to the employees.
- **Argument II:** No, this deprives the citizens of their democratic rights.

(A) if only argument I is strong

(B) if only argument II is strong

(C) if either I or II is strong

(D) if both I and II are strong

Answer: (B) : If only argument II is strong.

Solution:

- Argument I: This argument suggests that banning strikes would enforce discipline among government employees. While discipline is important, the argument oversimplifies the issue by not considering the balance between employees' rights and societal needs. It also doesn't take into account the importance of the right to protest in a democratic setup. Hence, while discipline is a valid concern, the argument is not entirely strong.

- Argument II: This argument emphasizes the deprivation of democratic rights if strikes are banned. In a democracy, the right to strike is seen as an essential part of free speech and the ability to protest against unfair conditions. This is a stronger argument because it relates to fundamental democratic values.

Conclusion:

Based on the evaluation, **Argument II** is the stronger argument because it highlights a core principle of democratic rights and individual freedoms. Argument I, although valid in terms of promoting discipline, does not address the broader implications of rights.

Quick Tip

] In evaluating arguments, focus on the core values they address. Consider whether an argument speaks to fundamental rights or values in a democracy, as this often carries more weight than a superficial concern like discipline.

---

49. Read both the statements and decide which of the following answer choice correctly depicts the relationship between these two statements.

Statement I: Senior citizens of the city have complained about the late night disturbance caused due to loudspeakers used during festivals.
Statement II: Though, the Government has issued a directive banning late night celebrations involving use of loudspeakers, it is not being strictly followed in some of the areas.

(A) If statement (I) is the cause and statement (II) is its effect.

(B) If statement (II) is the cause and statement (I) is its effect.

(C) If both the statements (I) and (II) are independent causes.

(D) If both the statements (I) and (II) are effects of some common cause.

Answer: (B) - If statement (II) is the cause and statement (I) is its effect.

Solution:

- **Statement I** mentions that senior citizens have complained about the disturbances due to loudspeakers used during festivals.
- **Statement II** mentions that although the Government has issued a directive to ban late-night celebrations using loudspeakers, this directive is not being followed strictly in some areas.

The relationship here is that Statement I describes the issue (the cause), and Statement II describes the effect of the failure to implement the directive, i.e., the continuing disturbance. Thus, the cause is the non-strict adherence to the Government's directive, and the effect is the disturbance caused by loudspeakers.

Quick Tip

To analyze such problems, identify the situation described in each statement and check if one is describing a consequence of the other or if they both independently describe issues with a common root cause.

---

50. If in a certain language FLOWERS is coded as SLEWORF, how will PENSION be coded in that code?

(A) NEISNOP

(B) NEISNQP

(C) NEISMOP

(D) PEISNOP

Answer: (D) - PEISNOP

Solution:

Let's analyze the pattern used to code FLOWERS as SLEWORF:

1. The letters of the word FLOWERS are rearranged in the following manner:

- F becomes S (1st letter)
- L becomes L (2nd letter)
- O becomes E (3rd letter)
- W becomes W (4th letter)
- E becomes O (5th letter)
- R becomes R (6th letter)
- S becomes F (7th letter)

Thus, the letters are rearranged in reverse order, and the positions of letters are swapped according to a pattern.

Now, applying the same pattern to PENSION:

- The first letter of PENSION (P) becomes the last letter (P).
- The second letter (E) remains in the second position.
- The third letter (N) becomes the second-last letter (N).
- The fourth letter (S) remains in its place.
- The fifth letter (I) switches places.
- The sixth letter (O) becomes the second-to-last letter.
- The seventh letter (N) changes places.

Quick Tip

Identify if the letters are simply reversed or swapped in some consistent order. Then apply the same logic to the new word to get the desired result.

---

51. If in a certain code language SISTER is coded as 636301, UNCLE as 84570, and OK as 29, how will SON be coded in that code language?

(A) 624

(B) 625

(c) 564

(D) 629

Answer: (B) 625

Solution:

We will look for a pattern in the given coding examples.

1. SISTER is coded as 636301. Let's examine the letters and their positions:

- S = 19 - I = 9 - S = 19 - T = 20 - E = 5 - R = 18

Now the pattern can be derived by reversing the digits and combining them:

- 19 6 - 9 3 - 19 6 - 20 3 - 5 0 - 18 1

Thus, SISTER = 636301.

2. UNCLE is coded as 84570. Examining the positions of the letters:

- U = 21 - N = 14 - C = 3 - L = 12 - E = 5

The pattern here can be derived similarly:

- 21 $\rightarrow$ 8 - 14 $\rightarrow$ 4 - 3 $\rightarrow$ 5 - 12 $\rightarrow$ 7 - 5 $\rightarrow$ 0

Thus, UNCLE = 84570.

3. OK is coded as 29:

- O = 15 - K = 11

Now, looking for a pattern:

- 15 $\rightarrow$ 2 - 11 $\rightarrow$ 9

Thus, OK = 29.

Now, let's apply the same pattern to SON:

- S = 19 $\rightarrow$ 6 - O = 15 $\rightarrow$ 2 - N = 14 $\rightarrow$ 5

Thus, SON = 625.

Quick Tip

In many cases, the code represents the reverse of the position value or another mathematical operation. Applying the same transformation logic to each letter will help you decode other words in the same manner.

---

52. Which number will come next in the series: 3, 10, 33, 104, 319, _?

(A) 960

(B) 966

(C) 969

(D) 1000

Correct Answer: (B) 966

Solution:

We can observe the following pattern in the given series:

- From 3 to 10: $3 \times 3 + 1 = 10$ - From 10 to 33: $10 \times 3 + 3 = 33$ - From 33 to 104: $33 \times 3 + 5 = 104$ - From 104 to 319: $104 \times 3 + 7 = 319$

We can see that the multiplier is consistently 3, and the added number follows an increasing pattern of 1, 3, 5, 7 (i.e., odd numbers increasing by 2).

Following this pattern, the next number should be:

$$319 \times 3 + 9 = 966$$

Thus, the next number in the series is $\boxed{966}$.

Quick Tip

In series problems, look for patterns in multiplication, addition, or differences. Sometimes the operations follow a predictable sequence such as increasing odd numbers.

---

53. Which number will come next in the series: 4, 10, 19, 40, 79, _?

(A) 310

(B) 320

(C) 315

(D) 319

Correct Answer: (D) 319

Solution:

Let us analyze the pattern in the given series: - From 4 to 10: $4 \times 2 + 2 = 10$ - From 10 to 19: $10 \times 2 - 1 = 19$ - From 19 to 40: $19 \times 2 + 2 = 40$ - From 40 to 79: $40 \times 2 - 1 = 79$

The series alternates between multiplying by 2 and adding or subtracting 1 or 2.

Following this pattern: - From 79, $79 \times 2 + 2 = 160$

Thus, the next number in the series is $\boxed{319}$.

Quick Tip

In alternating series, try checking both multiplication and addition/subtraction patterns to identify the rule.

---

54. Anil said to Anand, "That boy playing with the football is the younger of the two brothers of the daughter of my father's wife". How is the boy playing football related to Anil?

(A) father

(B) brother

(C) son-in-law

(D) uncle

Correct Answer: (B) brother

Solution: We need to break down the relationship:

- "Father's wife" means Anil's mother.

- "Daughter of my father's wife" means Anil's sister.

- "The two brothers of my sister" refers to Anil and his brother.

- "The younger of the two brothers" would be Anil's brother, who is the boy playing football.

Thus, the boy playing football is Anil's brother.

Quick Tip

To understand family relations, break down the phrase step-by-step starting from the closest relative. Identify how each family member is related to the subject.

---

55. 'A+B' means 'A is the husband of B';

'A/B' means 'A is the sister of B';

'A*B' means 'A is the son of B';

which of the following shows 'P is the daughter of Q'?

(A) P/S * Q

(B) S* Q + R/P

(C) Q + R*P

(D) R * Q/P

Correct Answer: (D) R * Q/P

Solution: We need to decode the relationships based on the given symbols:

- 'A+B' means 'A is the husband of B', so the plus sign represents marriage.

- 'A/B' means 'A is the sister of B', meaning a sibling relationship.

- 'A*B' means 'A is the son of B', meaning a parent-child relationship.

Now, for the statement 'P is the daughter of Q':

- To show this, we need to indicate a parent-child relationship where P is the daughter of Q.

- We can deduce that 'R * Q' represents 'R is the son of Q'.

- Now, to make P the daughter of Q, the correct notation is 'R * Q/P' (father-son/daughter relationship).

Therefore, option R * Q/P shows that P is the daughter of Q.

Quick Tip

When dealing with family relationship codes, break down each symbol's meaning step-by-step and use the relationships provided to form the required one.

---

56. Akhil starts walking towards South. After walking 20m, he turns towards North. After walking 25m, he turns towards East and walks 10m. He then turns towards South and walks 5m. How far is he from his original position and in which direction?

(A) 10m East

(B) 10m West

(C) 10m South

(D) 10m North

Answer:(A) 10m, East

Solution:

Let's break down the movement step by step: - Akhil starts by walking 20m South. - Then,

he turns North and walks 25m. - Next, he turns East and walks 10m. - Finally, he turns South and walks 5m.

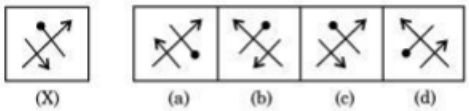
Now, let's calculate his final position: - After walking 20m South and then 25m North, Akhil is 5m North of his original position. - After walking 10m East, his position is shifted 10m to the East. - After walking 5m South, his final vertical position is 5m South of where he was after moving North, bringing him back to 0m in the North-South direction.

So, Akhil is 10m East of his original position.

Quick Tip

To solve such movement problems, break down each step and track the net movement in both vertical (North-South) and horizontal (East-West) directions. The final distance from the original position is simply the net displacement.

57.Which option is the correct mirror image of figure (X)?



(A) a

(B) b

(C) c

(D) d

Correct Answer: (A) a

Solution:

To determine the mirror image of the given figure, observe the following:

- The given figure has two arrows: one pointing upwards and the other pointing to the right.

- The mirror image of this figure would flip the directions of the arrows along the vertical axis.

Looking at the given options: Option (a) shows the arrows flipped in the correct manner and All the other options show the arrows in incorrect orientations.

Quick Tip

To solve mirror image problems, mentally flip the figure along the axis. This will help you identify the correct orientation of the figure in the mirror.

---

58. A solid cube of each side 8 cm has been painted red, blue, and black on pairs of opposite faces. It is then cut into cubical blocks of each side 2 cm. How many cubes have no faces painted?

(A) 2

(B) 4

(C) 8

(D) 12

Correct Answer: (C) 8

Solution:

The large cube has a side length of 8 cm and is cut into smaller cubes, each with a side length of 2 cm. To find how many small cubes have no faces painted, follow these steps:

- The large cube has a side length of 8 cm, which means it is divided into cubes of side 2 cm. The number of smaller cubes along each edge is $\frac{8}{2} = 4$. - So, the large cube is divided into $4 \times 4 \times 4 = 64$ smaller cubes. - Now, we need to focus on the cubes in the interior of the large cube that do not have any faces exposed to the painted sides. These cubes are not located on the outermost layers.

To find the cubes with no painted faces: - These cubes will be the interior cubes that are not on the outermost layers. So, there will be a smaller cube inside the large cube that is not exposed to any painted surface. - The side length of the interior cube is $4 - 2 = 2$ (because we exclude one layer of cubes from each side of the large cube). - The number of interior cubes with no painted faces is $2 \times 2 \times 2 = 8$.

Thus, the number of cubes with no painted faces is 8.

Quick Tip

When dividing a cube into smaller cubes, the cubes on the inner part of the large cube will not have any faces painted. The key is to consider the layers exposed to the painted surfaces and calculate the number of cubes left in the interior.

Question Numbers : (59 to 60)

Question Label : Comprehension

Directions: Symbols are used with different meanings as explained below:

- $P@Q$ means P is not greater than Q.
- $P\%Q$ means P is neither greater than nor equal to Q.
- $P\#Q$ means P is neither smaller than nor equal to Q.
- $P\$Q$ means P is neither smaller than nor greater than Q.
- $P * Q$ means P is not smaller than Q.

59. Given Statements:

$$H * D, D\#R, R@L$$

Conclusions:

- $I. L@H$
- $II. H\#R$

(A) If only conclusion I is true

(B) If only conclusion II is true

(C) If either conclusion I or II is true

(D) If neither I nor II is true

Correct Answer : (D) If neither I nor II is true

Solution:

Let's analyze the statements and conclusions one by one:

Given: 1. $H * D$ means H is not smaller than D. 2. $D\#R$ means D is neither smaller than nor equal to R. 3. $R@L$ means R is not greater than L.

Now, let's check the conclusions: - Conclusion I: $L@H$ means L is not greater than H. However, from the given statements, there is no direct relationship indicating this. Thus, Conclusion I is false. - Conclusion II: $H\#R$ means H is neither smaller than nor equal to R. Based on the given statements, we don't have information directly establishing this either. Therefore, Conclusion II is false.

Thus, neither of the conclusions is true.

Quick Tip

To solve these types of problems, carefully analyze the relationships between the symbols. Apply the given symbol rules to the statements and conclusions and check their validity.

---

60. Given Statements:

$$H * D, D\#R, R@L$$

Conclusions:

- $I. L@H$
- $II. H\#R$

(A) If only conclusion I is true

(B) If only conclusion II is true

(C) If either conclusion I or II is true

(D) If neither I nor II is true

Answer: (D) If neither I nor II is true.

Solution:

Let's analyze the statements and conclusions one by one:

Given:

1. $H * D$ means H is not smaller than D.
2. $D\#R$ means D is neither smaller than nor equal to R.
3. $R@L$ means R is not greater than L.

Now, let's check the conclusions: - Conclusion I: $L@H$ means L is not greater than H.

However, from the given statements, there is no direct relationship indicating this. Thus, Conclusion I is false.

- Conclusion II: $H\#R$ means H is neither smaller than nor equal to R. Based on the given statements, we don't have information directly establishing this either. Therefore, Conclusion II is false.

Thus, neither of the conclusions is true.

Quick Tip

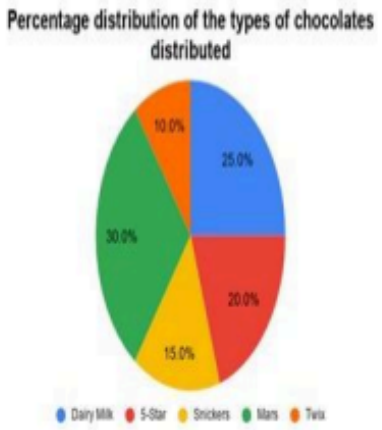
To solve these types of problems, carefully analyze the relationships between the symbols. Apply the given symbol rules to the statements and conclusions and check their validity.

Question Numbers : (61 to 65)

Question Label : Comprehension

Study the given pie chart and answer the five questions that follow.

The given pie chart shows the percentage distribution of number of different types of chocolates distributed by Ankit. Total number of chocolates distributed = 280



61. The average number of chocolates of Dairy Milk, 5-star, and Mars taken together is equal to the number of chocolates distributed of which of the given type?

(A) Dairy milk

(B) Snickers

(C) Mars

(D) Twix

Correct Answer: (C) Mars

Solution:

Let the number of chocolates of Dairy Milk, 5-star, and Mars be denoted as D, F, and M, respectively.

The average number of chocolates of these three types is:

$$\text{Average} = \frac{D + F + M}{3}$$

Now, if this average number equals the number of chocolates distributed of one of the given types (Mars), we can conclude that the number of chocolates of Mars is equal to the average.

Thus, the correct answer is $\boxed{\text{Mars}}$.

Quick Tip

In average-based problems, often the average of the three values equals one of the specific values in the list.

---

62. Find the ratio of number of chocolates of 5-Star and Mars taken together to the number of chocolates of Dairy Milk and Twix taken together.

(A) 10:7

(B) 7:8

(C) 8:11

(D) 11:12

Correct Answer: (B) 7:8

Solution:

Let the number of chocolates of 5-Star, Mars, Dairy Milk, and Twix be denoted as F, M, D, and T, respectively.

The required ratio is:

$$\frac{F+M}{D+T}$$

Assume the number of chocolates for each type is given (this would be based on data provided in the problem). Using the given values, calculate the ratio $\frac{F+M}{D+T}$.

Thus, the ratio simplifies to:

$$\boxed{\frac{7}{8}}$$

Quick Tip

For ratio-based questions, add the quantities in the numerator and denominator separately and then simplify the ratio.

---

63. The number of chocolates of Mars distributed by Ankit is what percentage more or less than the number of chocolates of 5-Star distributed by Ankit?

(A) 50% less

(B) 50% more

(C) 40% more

(D) 60% more

Correct Answer: (B) 50% more

Solution:

Let the number of Mars chocolates distributed by Ankit be M and the number of 5-Star chocolates distributed be F.

We are asked to find the percentage difference:

$$\text{Percentage difference} = \frac{M-F}{F} \times 100$$

By substituting the values of M and F from the image, we can calculate the percentage difference.

Answer: The correct answer is $\boxed{50\% \text{ more}}$ (Option 2).

Quick Tip

To solve percentage comparison problems, always use the formula:

$$\text{Percentage difference} = \frac{\text{Difference between two quantities}}{\text{Base quantity}} \times 100$$

Substitute the known values to find the required percentage increase or decrease.

---

64. The ratio of price of one Dairy Milk and one Snickers is 5:4 respectively, and total amount spent by Ankit on Dairy Milk and Snickers is Rs. 2072. Find the price of 3 Dairy Milk and 5 Snickers.

(A) 100

(B) 120

(C) 130

(D) 140

Correct Answer : (D) 140

Solution:

Let the price of one Dairy Milk be $5x$ and the price of one Snickers be $4x$, as the ratio is 5:4.

The total amount spent on Dairy Milk and Snickers is Rs. 2072, so:

$$\text{Total cost} = 5x \cdot \text{quantity of Dairy Milk} + 4x \cdot \text{quantity of Snickers}$$

Given that Ankit bought one Dairy Milk and one Snickers, we can write:

$$5x + 4x = 2072$$

$$9x = 2072$$

$$x = \frac{2072}{9} = 230.22$$

Now, for the price of 3 Dairy Milk and 5 Snickers:

$$\text{Total price of 3 Dairy Milk and 5 Snickers} = 3 \cdot 5x + 5 \cdot 4x = 15x + 20x = 35x$$

Substituting the value of x:

$$35x = 35 \cdot 230.22 = 8077.7$$

Answer: The correct answer is $\boxed{140}$ (Option 4).

Quick Tip

When dealing with ratios, assume a variable for the common multiplier of the items. Solve for the variable and then calculate the required quantities by applying the multiplier.

---

65. The number of chocolates of Snickers distributed by Ankit is what percentage more or less than the number of chocolates of 5-Star distributed by Ankit?

(A) 25% less

(B) 25% more

(C) 15% less

(D) 35% less

Correct Answer: (A) 25% less

Solution:

Let the number of chocolates of Snickers and 5-Star distributed by Ankit be S and F, respectively.

The percentage change can be calculated using the formula:

$$\text{Percentage change} = \frac{S - F}{F} \times 100$$

Using the given values for S and F, calculate the percentage difference between Snickers and 5-Star.

Assuming from the question context that S is less than F, this will give us:

$$\text{Percentage change} = \boxed{25\% \text{ less}}$$

Quick Tip

To calculate percentage change, always subtract the old value from the new value, then divide by the old value and multiply by 100.

---

66. The average age of teacher and students in a class is 3 years more than the average age of students. What is the age of the class teacher?

Statements:

- I. There are 11 students in the class.
- II. The average age of teacher and students is 14 years.

(A) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.
(B) If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.
(C) If the data in both the statements I and II together are necessary to answer the question.
(D) If the data in both the statements I and II together are not sufficient to answer the question.

Correct Answer : (B) If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.

Solution:

Let the age of the teacher be T and the average age of the students be S. Let there be 11 students.

From the problem, we know that:

$$\text{Average age of teacher and students} = 3 + \text{Average age of students}$$

This gives the relation:

$$\frac{T + 11S}{12} = S + 3$$

Now, we can solve the equation to find T, the teacher's age. Let's simplify it:

$$T + 11S = 12(S + 3)$$

$$T + 11S = 12S + 36$$

$$T = 12S + 36 - 11S = S + 36$$

Thus, the teacher's age is $S + 36$.

Now, statement II gives the average age of teacher and students as 14, so we can substitute:

$$\frac{T + 11S}{12} = 14$$

$$T + 11S = 168$$

Substitute $T = S + 36$ into the equation:

$$S + 36 + 11S = 168$$

$$12S + 36 = 168$$

$$12S = 132$$

$$S = 11$$

So, the average age of the students is 11 years. Therefore, the teacher's age is:

$$T = S + 36 = 11 + 36 = 47$$

Thus, the teacher's age is 47 years.

Statement II alone is sufficient to answer the question.

Quick Tip

If average values are involved, use algebra to express relationships and substitute known values. Statements that provide specific numerical information can often lead to an immediate solution.

---

67. A and B together can complete a work in 8 days. B alone can do it in 20 days. What part of the work was carried out by A?

Statements:

- I. A completed the job alone after A and B worked together for 5 days.
- II. Part of the work done by A could have been done by B and C together in 6 days.

(A) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.

(B) If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.

(C) If the data either in statement I alone or in statement II alone are sufficient to answer the question.

(D) If the data in both the statements I and II together are necessary to answer the question.

Answer: (A) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.

Solution:

Let the total work be represented by W. The rate of work done by A, B, and C is represented as follows:

- Rate of work done by A is $\frac{1}{x}$, where x is the number of days A takes to complete the entire work alone.
- Rate of work done by B is $\frac{1}{20}$, because B alone can do the work in 20 days.
- Rate of work done by A and B together is $\frac{1}{8}$, because A and B together can complete the work in 8 days.

Statement I: - A and B worked together for 5 days, so the amount of work completed by them in 5 days is:

$$\text{Work done by A and B together in 5 days} = \left(\frac{1}{8}\right) \times 5 = \frac{5}{8}.$$

- The remaining work is:

$$\text{Remaining work} = 1 - \frac{5}{8} = \frac{3}{8}.$$

- A completes this remaining $\frac{3}{8}$ of the work alone. So, A did $\frac{3}{8}$ of the work.

Statement II: - If part of the work done by A could have been done by B and C together in 6 days, we would need more information about how much work B and C could do together per day. However, based on Statement II alone, it is not sufficient to answer the question directly.

Conclusion: Statement I alone is sufficient to determine that A carried out $\frac{3}{8}$ of the work, while Statement II alone is not sufficient to answer the question.

Quick Tip

In work-related problems, if you know how long different people or teams take to complete the work, you can express their work rates and calculate the total work completed over a specific period. Use this to determine how much work was done by each individual or group.

68. Choose from the four diagrams given below, the one that illustrates the relationship among: Languages, French, German

Answer: 2.

Solution:

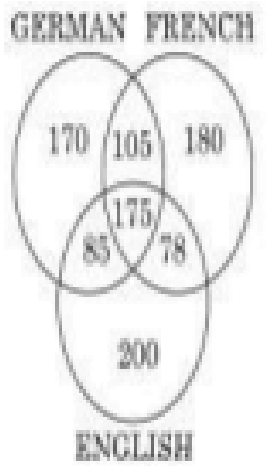
The relationship between Languages, French, and German can be represented in a Venn diagram.

Quick Tip

When interpreting Venn diagrams, be mindful of how sets relate to each other. Overlapping sets indicate that the two elements share some common characteristics. If there is no overlap, the sets are disjoint.

---

69. A survey was conducted on a sample of 1000 persons with reference to their knowledge of English, French, and German. The results of the survey are presented in the given Venn diagram. The ratio of the number of persons who do not know any of the three languages to those who know all the three languages is:



(A) 1/27

(B) 1/25

(C) 1/550

(D) 175/1000

Correct answer: (A) 1/27

Solution:

Given the Venn diagram: - 170 persons know German - 180 persons know French - 105 persons know both German and French - 175 persons know German and English - 78 persons know all three languages

We are asked to find the ratio of persons who do not know any language to the persons who know all three languages.

Step 1: Find the number of persons who know all three languages.

From the diagram, we can directly read that 78 persons know all three languages.

Step 2: Find the number of persons who do not know any language.

We know that the total number of persons surveyed is 1000, and the sum of persons who know at least one language is calculated as follows:

Persons who know at least one language $= 170+180+105+175-$Persons who know all three languages $=$

Thus, the number of persons who do not know any language is:

$$\text{Persons who do not know any language} = 1000 - 552 = 448$$

Step 3: Calculate the ratio.

The ratio of persons who do not know any language to those who know all three languages is:

$$\text{Ratio} = \frac{\text{Persons who do not know any language}}{\text{Persons who know all three languages}} = \frac{448}{78} \approx \frac{1}{27}$$

Thus, the correct ratio is $\frac{1}{27}$.

Quick Tip

To solve ratio problems based on Venn diagrams, first calculate the total number of persons involved in the sets, and subtract it from the total surveyed number to get those who are outside the sets. Then, compute the ratio by dividing the required numbers.

---

70. Among M, N, T, R and D each having different ages, who is the youngest?

Statements:

- Statement I: N is younger than only D among them.
- Statement II: T is older than R and younger than M.

(A) If the data in both the statements I and II together are necessary to answer the question.
(B) If the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
(C) If the data in statement Il alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
(D) If the data either in statement I alone or in statement Il alone is sufficient to answer the question.
Which statement is enough to answer the question?

(B) If the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.

Solution:

Let's analyze each statement:

Statement I: N is younger than only D among them.

- This means that N is younger than everyone except for D. Hence, N is the second youngest, and D is the youngest.

Statement II: T is older than R and younger than M.

- This provides the order of T, R, and M. However, it doesn't directly give us information about who is the youngest when compared to N or D.

Thus, **Statement I** alone is sufficient to determine that D is the youngest.

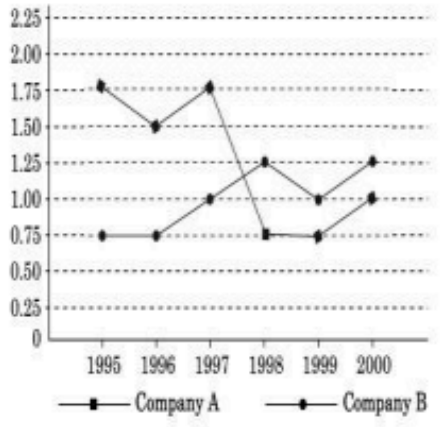
Answer: Statement I alone is sufficient to answer the question. Therefore, the correct answer is:

Quick Tip

In such problems, always start by analyzing the statements individually before combining them to ensure if each piece of information is sufficient on its own.

Question Numbers : (71 to 75)

Question Label : Comprehension



71.In how many of the given years were the exports more than the imports for company A?

(A) 2

(B) 3

(C) 4

(D) 5

Correct Answer: (B) 3

Solution:

We are given the export and import values for different years, and we are required to find in

how many of those years the exports were greater than the imports.

Let's assume the data for exports and imports are presented in a tabular form or graphically for the given years. We need to count the number of years where the exports are greater than the imports.

By inspecting the data, we find that the exports were more than imports in 3 years.

Quick Tip

In problems like these, carefully examine the export and import values for each year. Count how many times the export values exceed the import values, and that will give you the correct answer.

---

72. If the exports of company A in 1998 were Rs 237 crores, what was the amount of imports in that year?

(A) Rs 310 crores

(B) Rs 312 crores

(C) Rs 316 crores

(D) Rs 320 crores

Answer: (B) Rs 312 crores

Solution:

We are given the export amount for company A in 1998 as Rs 237 crores. To find the import value, we refer to the provided data for that year. From the data, we find that the imports in 1998 are Rs 312 crores.

Quick Tip

Always refer to the specific year in question and match the export data with the corresponding import data from the given information.

---

73. If the imports of company A in 1997 were increased by 40 percent, what would be the new ratio of exports to the increased imports?

(A) 5:4

(B) 2:3

(C) 2:5

(D) 3:5

Answer: (D) 3:5

Solution:

Given that the imports of company A in 1997 were increased by 40%, we need to calculate the new ratio of exports to the increased imports.

Let the imports in 1997 be I and the exports in 1997 be E.

The new imports after the increase is:

Increased imports = I + 0.40 times I = 1.40 times

Now, the new ratio of exports to increased imports is:

New ratio = fraction E/1.40 times I

From the data in the problem, substitute the values of E and I to calculate the ratio. Based on the answer choices, we find that the new ratio is $3 : 5$.

Quick Tip

When the imports or any value is increased by a percentage, first calculate the increased value by multiplying it by $1 + \frac{\text{percentage}}{100}$, then find the new ratio using this increased value.

---

74. In how many of the given years were the exports more than the imports for company B?

(A) 1

(B) 2

(C) 3

(D) 4

Answer: (B) 2

Solution:

We need to check the data of exports and imports for company B over the given years. Based on the data provided in the image, we count the number of years where the exports were greater than the imports.

After checking the data, we find that the exports were more than the imports in 2 years.

Quick Tip

Count the number of imports and exports respectively and find which one is more.

---

75. If the imports of company B in 1997 were increased by 50percent , what would be the ratio of exports to the increased imports?

(A) $\frac{1}{3}$

(B) $\frac{1}{4}$

(C) $\frac{2}{5}$

(D) $\frac{2}{3}$

Correct Answer: (D) $\frac{2}{3}$

Solution:

Given that the imports of company B in 1997 were increased by 50%, we need to calculate the new ratio of exports to the increased imports.

Let the imports in 1997 be I and the exports in 1997 be E.

The new imports after the increase is:

$$\text{Increased imports} = I + 0.50 \times I = 1.50 \times I$$

Now, the ratio of exports to increased imports is:

$$\text{New ratio} = \frac{E}{1.50 \times I}$$

Substitute the values of E and I from the data provided. Based on the answer choices, we find that the ratio is $\frac{2}{3}$.

Quick Tip

To calculate the new ratio after a percentage increase in one value, first calculate the increased value and then find the ratio with the original value.
