GMAT 2025 Practice Paper Set 1 Question Paper with Solutions

Time Allowed :2 Hours 15 Minutes	**Maximum Marks :**205-805	**Total Questions :**64

General Instructions

Read the following instructions very carefully and strictly follow them:

1. The GMAT exam is 2 hours and 15 minutes long (with one optional 10-minute break) and consists of 64 questions in total.
2. The GMAT exam is comprised of three sections:
3. Quantitative Reasoning: 21 questions, 45 minutes
4. Verbal Reasoning: 23 questions, 45 minutes
5. Data Insights: 20 questions, 45 minutes
6. You can answer the three sections in any order. As you move through a section, you can bookmark questions that you would like to review later.
7. When you have answered all questions in a section, you will proceed to the Question Review & Edit screen for that section.
8. If there is no time remaining in the section, you will NOT proceed to the Question Review & Edit screen and you will automatically be moved to your optional break screen or the next section (if you have already taken your optional break).
9. Each Question Review & Edit screen includes a numbered list of the questions in that section and indicates the questions you bookmarked.
10. Clicking a question number will take you to that specific question. You can review as many questions as you would like and can edit up to three (3) answers.

Quantitative Aptitude

1. If a certain wheel turns at a constant rate of x revolutions per minute, how many revolutions will the wheel make in k seconds?

(A) 60kx
(B) kx
(C) x/k
(D) x/(60k)
(E) kx/60

Correct Answer: (E) kx/60

Solution:

Step 1: Understanding the Concept:
This problem involves unit conversion. The rate is given in revolutions per minute, but the time is given in seconds. We must express both in compatible units before calculating the total revolutions.

Step 2: Key Formula or Approach:
Total Revolutions = Rate of Revolution $\times$ Time
We need to convert the rate from revolutions per minute to revolutions per second.

Step 3: Detailed Explanation:
The given rate is x revolutions per minute.
Since there are 60 seconds in a minute, we can convert the rate to revolutions per second:

$$\text{Rate} = \frac{x \text{ revolutions}}{1 \text{ minute}} = \frac{x \text{ revolutions}}{60 \text{ seconds}}$$

The time given is k seconds.
Now we can calculate the total number of revolutions:

$$\text{Total Revolutions} = \left(\frac{x}{60}\frac{\text{revolutions}}{\text{second}}\right) \times (k \text{ seconds})$$

$$\text{Total Revolutions} = \frac{kx}{60}$$

Step 4: Final Answer:
The wheel will make $\frac{kx}{60}$ revolutions in k seconds. This corresponds to option (E).

Quick Tip

Always check for consistent units. When rate and time are given in different units (like minutes and seconds), convert one to match the other before you multiply.

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2. Solve for x: 2x - 5 = 3(x + 1)

(A) 0
(B) 1
(C) 2
(D) 3

Correct Answer: (C) 2

Solution:

Step 1: Understanding the Concept:
This is a basic linear algebra problem where we need to solve for the variable x.

Step 2: Detailed Explanation:
The given equation is $2x - 5 = 3(x + 1)$.
Solving this equation step-by-step:

$$2x - 5 = 3x + 3$$
$$-5 - 3 = 3x - 2x$$
$$-8 = x$$

The calculated value is $x = -8$, which is not among the options. This suggests there is a typo in the question as presented in the exam paper. A common typo is a sign error. Let's assume the equation was intended to be $2x + 5 = 3(x + 1)$:

$$2x + 5 = 3(x + 1)$$
$$2x + 5 = 3x + 3$$
$$5 - 3 = 3x - 2x$$
$$2 = x$$

This result, $x = 2$, matches option (C). Given the multiple-choice format, it is highly probable this was the intended equation.

Step 3: Final Answer:
Assuming the intended equation was $2x + 5 = 3(x + 1)$, the value of x is 2. This corresponds to option (C).

Quick Tip

If your calculated answer for an algebra problem isn't in the options, double-check your work first. If your work is correct, suspect a typo in the question, often a plus/minus sign. You can test the given options to see which one might work if the equation were slightly different.

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3. A car travels at a speed of 60 miles per hour. How far will the car travel in 45 minutes?

(A) 45 miles
(B) 50 miles
(C) 55 miles
(D) 60 miles

Correct Answer: (A) 45 miles

Solution:

Step 1: Understanding the Concept:
This problem requires using the distance, speed, and time formula. It also involves a unit conversion from minutes to hours.

Step 2: Key Formula or Approach:
Distance = Speed × Time
Ensure that the units for speed and time are compatible.

Step 3: Detailed Explanation:
The speed is given as 60 miles per hour.
The time is given as 45 minutes. To use the formula, we must convert minutes to hours.

$$\text{Time in hours} = \frac{45 \text{ minutes}}{60 \text{ minutes/hour}} = \frac{3}{4} \text{ hours} = 0.75 \text{ hours}$$

Now, calculate the distance:

$$\text{Distance} = 60 \frac{\text{miles}}{\text{hour}} \times 0.75 \text{ hours}$$
$$\text{Distance} = 45 \text{ miles}$$

Step 4: Final Answer:
The car will travel 45 miles in 45 minutes. This corresponds to option (A).

Quick Tip

A speed of 60 miles per hour is equivalent to 1 mile per minute. So, in 45 minutes, the car travels 45 miles. This mental shortcut is very useful for this specific speed.

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4. If 4x + 3 = 19, what is the value of x?

(A) 2
(B) 3
(C) 4
(D) 5

Correct Answer: (C) 4

Solution:

Step 1: Understanding the Concept:
This is a basic linear equation. The goal is to isolate the variable x.

Step 2: Detailed Explanation:
Given the equation:

$$4x + 3 = 19$$

Subtract 3 from both sides:

$$4x = 19 - 3$$
$$4x = 16$$

Divide both sides by 4:

$$x = \frac{16}{4}$$
$$x = 4$$

Step 3: Final Answer:
The value of x is 4. This corresponds to option (C).

> **Quick Tip**
>
> To solve two-step equations like this, always perform the addition/subtraction operation first to isolate the term with the variable, then perform the multiplication/division.

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5. A store sells 12 pens for \$15. How much will 30 pens cost at the same rate?

(A) \$30
(B) \$35
(C) \$37.50
(D) \$40

Correct Answer: (C) \$37.50

Solution:

Step 1: Understanding the Concept:
This is a problem of direct proportion. The cost of the pens is directly proportional to the number of pens. We can solve it by finding the unit price or by setting up a ratio.

Step 2: Key Formula or Approach:
Method 1: Unit Price
1. Find the cost of one pen.
2. Multiply the unit cost by the desired number of pens.
Method 2: Proportion
Set up the equation: $\frac{\text{Cost}_1}{\text{Quantity}_1} = \frac{\text{Cost}_2}{\text{Quantity}_2}$

Step 3: Detailed Explanation:
Using the Unit Price Method:
Cost of 12 pens = \$15.
Cost of 1 pen = $\frac{\$15}{12} = \$1.25$.

Cost of 30 pens $= 30 \times \$1.25 = \$37.50$.

Using the Proportion Method:
Let C be the cost of 30 pens.

$$\frac{15}{12} = \frac{C}{30}$$

Solve for C:

$$C = \frac{15 \times 30}{12} = \frac{450}{12} = \frac{225}{6} = \frac{75}{2} = 37.50$$

The cost is \$37.50.

Step 4: Final Answer:
At the same rate, 30 pens will cost \$37.50. This corresponds to option (C).

Quick Tip

In proportion problems, simplifying the initial ratio can make calculations easier. The ratio of cost to pens is \$15 to 12, which simplifies to \$5 to 4. So, every 4 pens cost \$5. Since 30 pens is 7.5 groups of 4 pens, the cost is $7.5 \times \$5 = \$37.50$.

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6. If $x^2 - 9 = 0$, what is the value of x?

(A) 3
(B) -3
(C) 3 or -3
(D) 9

Correct Answer: (C) 3 or -3

Solution:

Step 1: Understanding the Concept:
This is a quadratic equation. We can solve it by isolating x^2 and taking the square root of both sides.

Step 2: Detailed Explanation:
The given equation is a difference of squares: $a^2 - b^2 = (a - b)(a + b)$.

$$x^2 - 9 = 0$$
$$x^2 - 3^2 = 0$$
$$(x - 3)(x + 3) = 0$$

This equation is true if either factor is zero:
$x - 3 = 0 \implies x = 3$
or
$x + 3 = 0 \implies x = -3$
Alternatively, we can isolate x^2:

$$x^2 = 9$$

Taking the square root of both sides, we must consider both the positive and negative roots:

$$x = \pm\sqrt{9}$$

$$x = 3 \text{ or } x = -3$$

Step 3: Final Answer:
The possible values for x are 3 and -3. This corresponds to option (C).

Quick Tip

Remember that taking the square root of a positive number yields two solutions: one positive and one negative. This is a common point where errors are made.

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7. A recipe calls for 4 cups of flour. If a baker wants to make half the recipe, how many cups of flour will be needed?

(A) 1 cup
(B) 2 cups
(C) 3 cups
(D) 4 cups

Correct Answer: (B) 2 cups

Solution:

Step 1: Understanding the Concept:
This is a simple fraction problem. We need to find half of a given quantity.

Step 2: Detailed Explanation:
The full recipe requires 4 cups of flour.
The baker wants to make half the recipe, so we need to calculate half of 4.

$$\text{Flour needed} = \frac{1}{2} \times 4 \text{ cups}$$

$$\text{Flour needed} = 2 \text{ cups}$$

Step 3: Final Answer:
The baker will need 2 cups of flour. This corresponds to option (B).

Quick Tip

This type of question tests basic real-world arithmetic. Read carefully to ensure you understand what fraction of the original quantity is needed.

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8. If 3x + 7 = 19, what is x?

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

Correct Answer: (A) 4

Solution:

Step 1: Understanding the Concept:
This is a linear equation that can be solved for the variable x using basic algebraic operations.

Step 2: Detailed Explanation:
Given the equation:

$$3x + 7 = 19$$

Subtract 7 from both sides to isolate the term with x:

$$3x = 19 - 7$$
$$3x = 12$$

Divide both sides by 3 to solve for x:

$$x = \frac{12}{3}$$
$$x = 4$$

Step 3: Final Answer:
The value of x is 4. This corresponds to option (A).

Quick Tip

After finding your solution, you can quickly check it by substituting the value back into the original equation. For $x = 4$, $3(4) + 7 = 12 + 7 = 19$. This confirms the answer is correct.

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9. What is the average of the following numbers: 10, 12, 14, 18, and 20?

(A) 14
(B) 15
(C) 16
(D) 17

Correct Answer: (C) 16

Solution:

Step 1: Understanding the Concept:
The average (or arithmetic mean) of a set of numbers is the sum of the numbers divided by the count of the numbers.

Step 2: Key Formula or Approach:
Average $= \frac{\textbf{Sum of terms}}{\textbf{Number of terms}}$

Step 3: Detailed Explanation:
The given numbers are 10, 12, 14, 18, and 20.
First, calculate the sum of these numbers:

$$\text{Sum} = 10 + 12 + 14 + 18 + 20 = 74$$

There are 5 numbers in the set.
Now, calculate the average:

$$\text{Average} = \frac{74}{5} = 14.8$$

The calculated average is 14.8, which is not one of the options. This indicates a likely typo in the question's numbers or options. If we assume one of the numbers is incorrect, let's see which change would lead to an answer choice. For the average to be 16 (Option C), the sum must be $16 \times 5 = 80$. The current sum is 74, which is 6 less than 80. If the number 14 was a typo for 20, the sum would be $10 + 12 + 20 + 18 + 20 = 80$, and the average would be 16. This is a plausible correction.

Step 4: Final Answer:
Assuming a typo in the question and that the numbers were intended to be 10, 12, 20, 18, and 20, the sum is 80 and the average is $\frac{80}{5} = 16$. This corresponds to option (C).

Quick Tip

When the calculated average isn't an option, check for typos. A quick way to find the needed sum for a target average is to multiply the average by the number of terms.

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10. Solve for y: 3y - 5 = 10

(A) 3
(B) 5
(C) 6
(D) 7

Correct Answer: (B) 5

Solution:

Step 1: Understanding the Concept:
This is a two-step linear equation. We need to perform two operations to isolate the variable y.

Step 2: Detailed Explanation:
The given equation is:

$$3y - 5 = 10$$

First, add 5 to both sides:

$$3y = 10 + 5$$
$$3y = 15$$

Next, divide both sides by 3:

$$y = \frac{15}{3}$$
$$y = 5$$

Step 3: Final Answer:
The value of y is 5. This corresponds to option (B).

Quick Tip

Always perform inverse operations to solve for a variable. The inverse of subtraction is addition, and the inverse of multiplication is division. Apply them in the reverse order of operations (reverse PEMDAS).

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11. What is the sum of 75, 100, and 125?

(A) 200
(B) 300
(C) 400
(D) 500

Correct Answer: (B) 300

Solution:

Step 1: Understanding the Concept:
This is a basic arithmetic problem requiring the addition of three numbers.

Step 2: Detailed Explanation:
We need to calculate the sum:

$$75 + 100 + 125$$

We can group the numbers to make addition easier:

$$(75 + 125) + 100$$
$$200 + 100 = 300$$

Alternatively, adding sequentially:

$$75 + 100 = 175$$
$$175 + 125 = 300$$

Step 3: Final Answer:
The sum is 300. This corresponds to option (B).

Quick Tip

When adding a list of numbers, look for pairs that add up to a round number (like a multiple of 10 or 100). This can simplify the calculation. Here, 75 and 125 add up to 200.

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12. If 2x - 3 = 9, what is the value of x?

(A) 3
(B) 4
(C) 5
(D) 6

Correct Answer: (D) 6

Solution:

Step 1: Understanding the Concept:
This is a two-step linear algebraic equation. We need to isolate x.

Step 2: Detailed Explanation:
The given equation is:

$$2x - 3 = 9$$

Add 3 to both sides of the equation:

$$2x = 9 + 3$$
$$2x = 12$$

Divide both sides by 2:

$$x = \frac{12}{2}$$
$$x = 6$$

Step 3: Final Answer:
The value of x is 6. This corresponds to option (D).

Quick Tip

Quickly check your answer: plug $x = 6$ back into the original equation. $2(6) - 3 = 12 - 3 = 9$. The equation holds, so the answer is correct.

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13. If x + 4 = 7, what is x?

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

Correct Answer: (C) 3

Solution:

Step 1: Understanding the Concept:
This is a one-step linear equation. We need to solve for x by isolating it on one side of the equation.

Step 2: Detailed Explanation:
The equation is:

$$x + 4 = 7$$

To isolate x, subtract 4 from both sides of the equation:

$$x = 7 - 4$$
$$x = 3$$

Step 3: Final Answer:
The value of x is 3. This corresponds to option (C).

Quick Tip

Even for simple equations, it's good practice to think in terms of inverse operations. The inverse of adding 4 is subtracting 4.

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14. A farmer sells apples at $2 per apple. How much would 24 apples cost?

(A) $36
(B) $40
(C) $42
(D) $48

Correct Answer: (D) $48

Solution:

Step 1: Understanding the Concept:
This problem involves direct multiplication to find the total cost based on a unit price and quantity.

Step 2: Key Formula or Approach:
Total Cost = Unit Price × Quantity

Step 3: Detailed Explanation:
The unit price is $2 per apple.
The quantity is 24 apples.

$$\text{Total Cost} = \$2/\text{apple} \times 24 \text{ apples}$$

$$\text{Total Cost} = \$48$$

Step 4: Final Answer:
The cost of 24 apples would be $48. This corresponds to option (D).

Quick Tip

For straightforward multiplication problems, always double-check the simple arithmetic, as it's easy to make a careless mistake under pressure.

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15. Solve for x: 3x + 2 = 11

(A) 2
(B) 3
(C) 4
(D) 5

Correct Answer: (B) 3

Solution:

Step 1: Understanding the Concept:
This is a two-step linear equation. We must perform two inverse operations to find the value of x.

Step 2: Detailed Explanation:
The given equation is:

$$3x + 2 = 11$$

Subtract 2 from both sides:

$$3x = 11 - 2$$
$$3x = 9$$

Divide both sides by 3:

$$x = \frac{9}{3}$$
$$x = 3$$

Step 3: Final Answer:
The value of x is 3. This corresponds to option (B).

> Quick Tip
>
> To avoid errors in solving equations, perform one operation at a time and rewrite the equation at each step.

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16. If a shirt costs \$30 after a 20% discount, what was the original price?

(A) \$36
(B) \$37.50
(C) \$38
(D) \$40

Correct Answer: (B) \$37.50

Solution:

Step 1: Understanding the Concept:
This is a reverse percentage problem. We are given the final price after a discount and need to find the original price.

Step 2: Key Formula or Approach:
Let P be the original price.
Final Price = Original Price $\times$ (1 - Discount Rate)
We need to solve for P.

Step 3: Detailed Explanation:
The discount is 20%, or 0.20.
The discounted price is \$30.
If a 20% discount was applied, the final price represents $100\% - 20\% = 80\%$ of the original price.
So, \$30 is 80% of the original price P.

$$30 = 0.80 \times P$$

To find P, divide \$30 by 0.80:

$$P = \frac{30}{0.80} = \frac{30}{4/5} = 30 \times \frac{5}{4} = \frac{150}{4}$$
$$P = 37.50$$

The original price was \$37.50.

Step 4: Final Answer:
The original price of the shirt was \$37.50. This corresponds to option (B).

Quick Tip

A common mistake is to add 20% of \$30 to \$30. Remember that the discount was calculated on the original, higher price. To reverse a percentage decrease, you must divide by the remaining percentage.

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17. If the total cost of 5 pencils and 3 erasers is \$3.75, and the total cost of 4 pencils and 5 erasers is \$3.50, what is the price of one pencil?
(1) The price of an eraser is \$0.25.
(2) The price of 5 pencils and 3 erasers is \$3.75.

(A) Statement (1) alone is sufficient.
(B) Statement (2) alone is sufficient.
(C) Both statements together are sufficient.
(D) Each statement alone is not sufficient.

Correct Answer: (C) Both statements together are sufficient.

Solution:

Step 1: Understanding the Concept:
This question is formatted as a Data Sufficiency problem. We must determine if the information in the statements is sufficient to answer the question. The text in the main question stem is unusually detailed and appears to be poorly formatted, likely intended as context or potentially replacing the statements themselves. The most logical interpretation is to treat this as a standard Data Sufficiency question where the question is "What is the price of one pencil?" and we evaluate the numbered statements.

Step 2: Analyzing the Question and Statements:
Let p be the price of a pencil and e be the price of an eraser.
The question is: What is the value of p?

Evaluating Statement (1) Alone:
"The price of an eraser is \$0.25."
This gives us $e = 0.25$. However, we have no information about the price of a pencil, p.
Therefore, Statement (1) alone is not sufficient.

Evaluating Statement (2) Alone:
"The price of 5 pencils and 3 erasers is \$3.75."
This gives us one equation with two variables: $5p + 3e = 3.75$. We cannot determine a unique value for p from this single equation.
Therefore, Statement (2) alone is not sufficient.

Evaluating Statements (1) and (2) Together:
From Statement (1), we have $e = 0.25$.
From Statement (2), we have the equation $5p + 3e = 3.75$.
We can substitute the value of e from Statement (1) into the equation from Statement (2):

$$5p + 3(0.25) = 3.75$$
$$5p + 0.75 = 3.75$$
$$5p = 3.75 - 0.75$$
$$5p = 3.00$$
$$p = \frac{3.00}{5} = 0.60$$

We can find a single, unique value for p.
Therefore, both statements together are sufficient.

Step 3: Final Answer:
Neither statement alone is sufficient, but together they are sufficient. This corresponds to option (C). (Note: The information in the question stem is contradictory to the statements and should be disregarded as it makes the question unsolvable as written.)

Quick Tip

In Data Sufficiency, focus on whether a unique answer can be found, not on the actual calculation. If a statement gives you a solvable system of equations (e.g., n equations for n variables), it is sufficient.

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17. If a car travels 180 miles at a constant speed of 60 miles per hour, how many hours did the car travel?

(A) 2 hours
(B) 3 hours
(C) 4 hours
(D) 5 hours

Correct Answer: (B) 3 hours

Solution:

Step 1: Understanding the Concept:
This problem uses the relationship between distance, speed, and time. We need to calculate the time taken for a journey given the distance and speed.

Step 2: Key Formula or Approach:
The fundamental formula relating distance, speed, and time is:
Distance = Speed $\times$ Time
To find the time, we can rearrange this formula to:
Time = $\frac{\text{Distance}}{\text{Speed}}$

Step 3: Detailed Explanation:
Given information:
- Distance = 180 miles
- Speed = 60 miles per hour
Using the formula to find the time:

$$\text{Time} = \frac{180 \text{ miles}}{60 \text{ miles per hour}}$$
$$\text{Time} = 3 \text{ hours}$$

Step 4: Final Answer:
The car traveled for 3 hours. This corresponds to option (B).

Quick Tip

For questions involving distance, speed, and time, ensure all units are consistent before performing calculations. In this case, the units (miles and hours) are already consistent.

18. Solve for x: 5x - 8 = 7

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

Correct Answer: (C) 3

Solution:

Step 1: Understanding the Concept:
This is a two-step linear equation. The goal is to isolate the variable x using algebraic manipulations.

Step 2: Detailed Explanation:
The given equation is:

$$5x - 8 = 7$$

First, add 8 to both sides of the equation to isolate the term with x:

$$5x = 7 + 8$$
$$5x = 15$$

Next, divide both sides by 5 to solve for x:

$$x = \frac{15}{5}$$
$$x = 3$$

Step 3: Final Answer:
The value of x is 3. This corresponds to option (C).

Quick Tip

You can quickly verify your answer by substituting it back into the original equation. For $x = 3$, the equation becomes $5(3) - 8 = 15 - 8 = 7$. Since this is true, the answer is correct.

19. A box contains 12 red balls and 18 blue balls. If a ball is selected at random, what is the probability that it is red?

(A) 2/5
(B) 3/5

(C) 1/2
(D) 1/3

Correct Answer: (A) 2/5

Solution:

Step 1: Understanding the Concept:
Probability is the measure of the likelihood of an event occurring. It is calculated as the ratio of the number of favorable outcomes to the total number of possible outcomes.

Step 2: Key Formula or Approach:
$$\textbf{Probability(Event)} = \frac{\textbf{Number of Favorable Outcomes}}{\textbf{Total Number of Possible Outcomes}}$$

Step 3: Detailed Explanation:
First, identify the number of favorable outcomes. The event is selecting a red ball.
- Number of red balls (favorable outcomes) = 12
Next, calculate the total number of possible outcomes. This is the total number of balls in the box.
- Total number of balls = (Number of red balls) + (Number of blue balls)
- Total number of balls = 12 + 18 = 30
Now, calculate the probability of selecting a red ball:

$$P(\text{Red}) = \frac{12}{30}$$

Finally, simplify the fraction:

$$P(\text{Red}) = \frac{12 \div 6}{30 \div 6} = \frac{2}{5}$$

Step 4: Final Answer:
The probability that the selected ball is red is 2/5. This corresponds to option (A). (Note: The options in the original document were garbled, but the numerical answer corresponds to 2/5).

Quick Tip

In probability questions, always start by finding the total number of possible outcomes. This forms the denominator of your probability fraction. Then, find the number of outcomes that match the specific event you're interested in for the numerator.

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20. What is the value of x if 2x - 4 = 10?

(A) 7
(B) 6
(C) 5
(D) 4

Correct Answer: (A) 7

Solution:

Step 1: Understanding the Concept:
This is a standard two-step linear equation. The objective is to find the value of x that satisfies the equation.

Step 2: Detailed Explanation:
The given equation is:

$$2x - 4 = 10$$

To isolate the term containing x, add 4 to both sides of the equation:

$$2x = 10 + 4$$
$$2x = 14$$

Now, to solve for x, divide both sides by 2:

$$x = \frac{14}{2}$$
$$x = 7$$

Step 3: Final Answer:
The value of x is 7. This corresponds to option (A).

Quick Tip

To solve equations, apply inverse operations in the reverse order of the standard order of operations (PEMDAS). Here, you undo the subtraction first, then the multiplication.

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21. Solve for x: 3x = 15

(A) 2
(B) 3
(C) 4
(D) 5

Correct Answer: (D) 5

Solution:

Step 1: Understanding the Concept:
This is a one-step linear equation. We need to find the value of x by isolating it.

Step 2: Detailed Explanation:
The given equation is:

$$3x = 15$$

To solve for x, divide both sides of the equation by the coefficient of x, which is 3:

$$x = \frac{15}{3}$$
$$x = 5$$

Step 3: Final Answer:
The value of x is 5. This corresponds to option (D).

Quick Tip

In equations of the form $ax = b$, the solution is always $x = b/a$. This is a fundamental pattern in algebra.

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22. A bus travels 40 miles per hour for 2 hours. How far does it travel?

(A) 70 miles
(B) 80 miles
(C) 90 miles
(D) 100 miles

Correct Answer: (B) 80 miles

Solution:

Step 1: Understanding the Concept:
This problem requires the calculation of distance traveled, given a constant speed and a specific duration of time.

Step 2: Key Formula or Approach:
The relationship between distance, speed, and time is given by the formula:
Distance = Speed $\times$ Time

Step 3: Detailed Explanation:
The given information is:
- Speed = 40 miles per hour
- Time = 2 hours
The units are consistent, so we can directly apply the formula:

$$\text{Distance} = 40\frac{\text{miles}}{\text{hour}} \times 2 \text{ hours}$$
$$\text{Distance} = 80 \text{ miles}$$

Step 4: Final Answer:
The bus travels 80 miles. This corresponds to option (B).

Quick Tip

Think of "miles per hour" as a rate. If the bus travels 40 miles in one hour, it will travel twice that distance in two hours. This intuitive approach can often solve these problems without formally writing the formula.

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23. Is the integer x even?
(1) x + 1 is odd.
(2) x is an integer greater than 1.

(A) Statement (1) alone is sufficient to answer the question.
(B) Statement (2) alone is sufficient to answer the question.
(C) Both statements together are sufficient to answer the question.
(D) Each statement alone is not sufficient to answer the question.

Correct Answer: (A) Statement (1) alone is sufficient to answer the question.

Solution:

Step 1: Understanding the Concept:
This is a Data Sufficiency question that deals with number properties, specifically the properties of even and odd integers. An integer is even if it is divisible by 2, and odd otherwise. Consecutive integers always alternate between even and odd.

Step 2: Detailed Explanation:
Evaluating Statement (1) Alone:
"x + 1 is odd."
If an integer k is odd, then the integer immediately preceding it, $k - 1$, must be even.
In this case, the integer x is the one immediately preceding $x + 1$.
Therefore, if $x + 1$ is odd, x must be even.
This statement provides a definitive "Yes" answer to the question "Is the integer x even?".
So, Statement (1) alone is sufficient.

Evaluating Statement (2) Alone:
"x is an integer greater than 1."
This means x could be 2, 3, 4, 5, etc.
- If $x = 2$, the answer is "Yes, x is even."
- If $x = 3$, the answer is "No, x is not even."
Since we can get both a "Yes" and a "No" answer, this statement does not provide a definitive answer.
So, Statement (2) alone is not sufficient.

Step 3: Final Answer:
Statement (1) alone is sufficient to answer the question, but statement (2) alone is not. This corresponds to option (A).

Quick Tip

For Data Sufficiency questions about number properties, testing a few small integers is an effective strategy. If you can find one case that gives a "Yes" and another that gives a "No", the statement is not sufficient. If all test cases give the same answer, the statement is likely sufficient.

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24. A total of 180 students attended a concert. Of these, 60 students were under 18 years old, 40 were between 18 and 25 years old, and the remaining students were over 25 years old. How many students were over 25 years old?

(A) 60
(B) 80
(C) 100
(D) 120

Correct Answer: (B) 80

Solution:

Step 1: Understanding the Concept:
This is a word problem that can be solved using simple arithmetic. We need to find the size of a remaining group after subtracting the sizes of the known groups from the total.

Step 2: Detailed Explanation:
The given information is:
- Total number of students = 180
- Number of students under 18 = 60
- Number of students between 18 and 25 = 40
First, find the total number of students in the two known age groups:

$$\text{Total in known groups} = 60 + 40 = 100 \text{ students}$$

The remaining students are in the "over 25" group. To find this number, subtract the total of the known groups from the overall total:

$$\text{Students over 25} = (\text{Total students}) - (\text{Total in known groups})$$

$$\text{Students over 25} = 180 - 100 = 80 \text{ students}$$

Step 3: Final Answer:
There were 80 students over 25 years old. This corresponds to option (B).

Quick Tip

In problems with multiple categories that make up a whole, the fundamental logic is often: **Part1 + Part2 + ... + PartN = Total**. You can rearrange this to find any missing part.

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25. If 2x + 5 = 17, what is x?

(A) 6
(B) 5
(C) 4
(D) 3

Correct Answer: (A) 6

Solution:

Step 1: Understanding the Concept:
This is a two-step linear equation. The goal is to solve for the unknown variable x.

Step 2: Detailed Explanation:
The given equation is:

$$2x + 5 = 17$$

First, subtract 5 from both sides of the equation to isolate the term with the variable:

$$2x = 17 - 5$$
$$2x = 12$$

Next, divide both sides by 2 to find the value of x:

$$x = \frac{12}{2}$$
$$x = 6$$

Step 3: Final Answer:
The value of x is 6. This corresponds to option (A).

Quick Tip

Check your answer by plugging it back into the original equation: $2(6) + 5 = 12 + 5 = 17$. The equality holds, so the answer is correct.

Verbal Reasoning

26. "Economic recessions are often seen as negative events that disrupt national economies. However, some economists argue that recessions can be beneficial in the long term. They can encourage businesses to become more efficient and help reduce inflation." Which of the following is the main idea of the passage?

(A) Recessions are harmful to national economies.
(B) Some economists believe recessions may have positive effects.
(C) Inflation is caused by recessions.
(D) Businesses become more efficient during recessions.

Correct Answer: (B) Some economists believe recessions may have positive effects.

Solution:

Step 1: Understanding the Concept:
This is a main idea question. We need to identify the central point that the entire passage is built around.

Step 2: Detailed Explanation:
The passage starts by presenting a common view ("recessions are often seen as negative"). It then uses the transition word "However" to introduce a contrasting view. The rest of the passage explains this contrasting view: "some economists argue that recessions can be beneficial" and provides examples (efficiency, reduced inflation). The main idea is this contrasting viewpoint that the author is presenting.
- (A) Recessions are harmful to national economies. This is the initial viewpoint that the passage contrasts with, not the main idea.
- (B) Some economists believe recessions may have positive effects. This accurately summarizes the central argument introduced after "However".
- (C) Inflation is caused by recessions. The passage states that recessions help *reduce* inflation, not cause it.
- (D) Businesses become more efficient during recessions. This is a specific example used to support the main idea, but it is not the main idea itself. The main idea is the broader concept that recessions can be beneficial.

Step 3: Final Answer:
The main idea of the passage is that some economists hold the view that recessions can have beneficial outcomes. This corresponds to option (B).

Quick Tip

In main idea questions, look for transition words like "however," "but," or "although." They often signal a shift to the author's central point. The main idea should be general enough to cover all the details, but not so general that it's vague. Supporting details are not the main idea.

27. A study suggests that a new drug will help reduce symptoms of a certain illness. Which of the following, if true, would most strengthen the study's conclusion?

(A) The drug has been tested on a large group of patients.
(B) The drug is expensive to produce.
(C) Other drugs for the illness have shown no improvements.
(D) The drug can cause some side effects.

Correct Answer: (A) The drug has been tested on a large group of patients.

Solution:

Step 1: Understanding the Concept:
This is a Critical Reasoning question that asks us to strengthen a conclusion. We need to find a new piece of information that makes the conclusion of the study more likely to be true.

Step 2: Detailed Explanation:
The conclusion is that a new drug is effective. The strength of a scientific study's conclusion depends heavily on the quality of its methodology.
- (A) The drug has been tested on a large group of patients. A large sample size is a key component of a methodologically sound study. It makes the results less likely to be due to random chance and more likely to be generalizable to the wider population of people with the illness. This directly strengthens the validity of the study's conclusion.
- (B) The drug is expensive to produce. The cost of the drug is irrelevant to its effectiveness.
- (C) Other drugs for the illness have shown no improvements. The failure of other drugs does not provide evidence for the success of this new drug.
- (D) The drug can cause some side effects. The presence of side effects is a negative aspect of the drug and does not strengthen the conclusion that it is effective at reducing symptoms. It might even weaken the overall case for using the drug.

Step 3: Final Answer:
The fact that the study was conducted on a large group of patients strengthens the reliability and credibility of its findings. This corresponds to option (A).

Quick Tip

To strengthen a conclusion based on a study, look for answers that improve the study's methodology. Common strengtheners include a large and representative sample, the use of a control group, and evidence that the study was double-blind.

28. "The new law mandates a reduction in carbon emissions by 20% over the next decade. This has led to protests from various industries that rely heavily on fossil fuels, citing potential job losses and economic hardship." Which of the following

can be inferred from the passage?

(A) The law will have no impact on fossil fuel industries.
(B) The reduction in emissions will create new jobs in other sectors.
(C) Industries relying on fossil fuels are resistant to the new law.
(D) The new law was universally accepted.

Correct Answer: (C) Industries relying on fossil fuels are resistant to the new law.

Solution:

Step 1: Understanding the Concept:
This is an inference question. An inference is a conclusion that is strongly supported by the text, even if it is not stated directly.

Step 2: Detailed Explanation:
The passage states that the new law has "led to protests from various industries that rely heavily on fossil fuels."
- (A) The law will have no impact on fossil fuel industries. This is directly contradicted by the text, as the industries are protesting due to the expected impact ("job losses and economic hardship").
- (B) The reduction in emissions will create new jobs in other sectors. The passage does not provide any information about job creation in other sectors. This cannot be inferred.
- (C) Industries relying on fossil fuels are resistant to the new law. The fact that these industries are "protesting" is direct evidence of their resistance to the law. This is a valid and strongly supported inference.
- (D) The new law was universally accepted. This is directly contradicted by the mention of "protests."

Step 3: Final Answer:
The passage provides clear evidence that certain industries are resisting the new law. This corresponds to option (C).

Quick Tip

A correct inference must be based solely on the information given in the passage. Avoid answer choices that bring in outside knowledge or make assumptions that are not supported by the text.

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29. A recent study claims that reading books increases intelligence. Which of the following would most weaken the argument?

(A) People who read regularly tend to perform better academically.
(B) Intelligence is influenced by many factors, not just reading.

(C) Reading improves memory, which is linked to intelligence.
(D) The study focused on young children only.

Correct Answer: (D) The study focused on young children only.

Solution:

Step 1: Understanding the Concept:
This is a Critical Reasoning question that asks us to weaken an argument. The argument makes a causal claim (reading $\rightarrow$ increased intelligence) based on a study. To weaken it, we should look for flaws in the study's methodology or alternative explanations for the findings.

Step 2: Detailed Explanation:
The argument's conclusion is a general claim about the effect of reading.
- (A) People who read regularly tend to perform better academically. This shows a positive correlation between reading and another measure of cognitive ability (academic performance), which would strengthen, not weaken, the argument.
- (B) Intelligence is influenced by many factors, not just reading. This states that reading is not the only cause of intelligence. However, this does not weaken the claim that reading is *one* of the causes. It's a weakener at best, as it just adds context.
- (C) Reading improves memory, which is linked to intelligence. This provides a mechanism for how reading could increase intelligence, which strengthens the argument.
- (D) The study focused on young children only. This is a strong weakener. It points out a major flaw in the study's methodology: a biased or unrepresentative sample. A conclusion drawn from a study on only young children cannot be reliably generalized to the entire population. The effect might be unique to children during a specific developmental phase. This casts doubt on the broad claim that "reading books increases intelligence" in general.

Step 3: Final Answer:
Pointing out a flaw in the study's sample group is a powerful way to weaken the general conclusion drawn from it. This corresponds to option (D).

Quick Tip

To weaken a causal conclusion based on a study, look for answers that either: 1) suggest an alternative cause for the observed effect, 2) show that the cause can happen without the effect, or 3) point out a fundamental flaw in the study's methodology (like a biased sample).

---

30. "The rise of digital communication has changed the way businesses operate. Companies now rely on email, instant messaging, and video calls to communicate internally and externally, creating new efficiencies but also new challenges." Based on the passage, how should companies address the challenges of digital communication?

(A) By reverting to traditional methods of communication.
(B) By implementing new technologies and tools.
(C) By discouraging digital communication.
(D) By focusing only on internal communication.

Correct Answer: (B) By implementing new technologies and tools.

Solution:

Step 1: Understanding the Concept:
This question asks for an inference about how to solve a problem introduced in the text. We must choose the most logical course of action based on the information provided, even if it's not explicitly stated.

Step 2: Detailed Explanation:
The passage states that digital communication has created both "new efficiencies" and "new challenges." The question is how to address the challenges.
- (A) Reverting to traditional methods would mean losing the "new efficiencies," which is an unlikely business strategy.
- (C) Discouraging digital communication is similar to option (A) and would also forfeit the benefits.
- (D) Focusing only on internal communication ignores the stated fact that these tools are used for both internal and external communication.
- (B) By implementing new technologies and tools. This is the most logical inference. When a system (like digital communication) creates challenges, a common approach is not to abandon it but to improve it. This can involve adopting better tools (e.g., project management software to reduce email clutter, more secure video conferencing tools) that manage the challenges while retaining the efficiencies. While the passage does not state this directly, it is the only forward-looking option that doesn't contradict the premise that digital communication provides valuable efficiencies.

Step 3: Final Answer:
Based on the context of business operations and change, the most logical way to address challenges created by technology is to refine the technological approach, making option (B) the most plausible inference.

Quick Tip

In inference questions with limited text, eliminate options that contradict the passage or are illogical in the given context. The best answer is often the one that represents a logical continuation of the ideas presented.

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31. A company claims that its employees work better when they have flexible hours. Which of the following, if true, would most reveal a flaw in the company's

reasoning?

(A) Employees with flexible hours often complete their work early.
(B) Employees in different departments work different hours.
(C) The company has not conducted studies comparing flexible hours to standard hours.
(D) The company's employees value flexibility.

Correct Answer: (C) The company has not conducted studies comparing flexible hours to standard hours.

Solution:

Step 1: Understanding the Concept:
This is a Critical Reasoning question that asks to identify a flaw in the company's argument. The claim is comparative ("work better"), so the reasoning must be based on a valid comparison.

Step 2: Detailed Explanation:
The company's claim is that flexible hours lead to better work. The phrase "work better" implies a comparison: better than they would under a different system, presumably standard hours.
- (A) Employees completing work early would seem to support the claim that they work better, not expose a flaw.
- (B) Different departments working different hours is an expected feature of a flexible hours policy, not a flaw in the reasoning about its effectiveness.
- (C) If the company has not compared the performance of employees on flexible hours to the performance of employees on standard hours, then there is no basis for the comparative claim "work better." The company is making a conclusion without the necessary evidence. This is a significant logical flaw.
- (D) Employees valuing flexibility might explain *why* they work better, which would strengthen the company's claim rather than weaken it.

Step 3: Final Answer:
The reasoning is flawed because a comparative conclusion has been drawn without making the necessary comparison. Option (C) points this out directly.

Quick Tip

When you see a comparative claim in a Critical Reasoning question (using words like "better," "more," "less," "worse"), check if a valid comparison has been made. A common flaw is drawing a comparative conclusion from non-comparative evidence.

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32. (The following is based on material written in 1996.) The Montreal Protocol on Substances That Deplete the Ozone Layer... signed in 1987 by more than 150 nations, has attained its short-term goals: it has decreased the rate of increase in amounts of most ozone-depleting chemicals reaching the atmosphere and

has even reduced the atmospheric levels of some of them. The projection that the ozone layer will substantially recover from ozone depletion by 2050 is based on the assumption that the protocol's regulations will be strictly followed. Yet there is considerable evidence of violations, particularly in the form of the release of ozone-depleting chlorofluorocarbons (CFCs), which are commonly used in the refrigeration, heating. and air-conditioning industries. These violations reflectindustry attitudes; for example, in the United States, 48% of respondents in a recent survey of subscribers to Air Conditioning, Heating, and Refrigeration News, an industry trade journal, said that they did not believe that CFCs damage the ozone layer. Moreover, some in the industry apparently do not want to pay for CFC substitutes, which can run five times the cost of CFCs. Consequently, a black market in imported illicit CFCs has grown. Estimates of the contraband CFC trade range from 10,000 to 22,000 tons a year, with most of the CFCs originating in India and China, whose agreements under the protocol still allow them to produce CFCs. In fact, the United States Customs Service reports that CFC-12 is a contraband problem second only to illicit drugs. ...The passage suggests which of the following about the illicit trade in CFCs?

(A) It would cease if manufacturers in India and China stopped producing CFCs.
(B) Most people who participate in such trade do not believe that CFCs deplete the ozone layer.
(C) It will probably surpass illicit drugs as the largest contraband problem faced by the United States Customs Service.
(D) It is fostered by people who do not want to pay the price of CFC substitutes.
(E) It has grown primarily because of the expansion of the refrigeration, heating, and air-conditioning industries in foreign countries.

Correct Answer: (D) It is fostered by people who do not want to pay the price of CFC substitutes.

Solution:

Step 1: Understanding the Concept:
This Reading Comprehension question asks us to identify a statement about the illicit CFC trade that is supported by the passage. We need to find the option that is either stated directly or strongly implied.

Step 2: Detailed Explanation:
Let's analyze the passage for clues about the illicit trade:
The passage states, "...some in the industry apparently do not want to pay for CFC substitutes, which can run five times the cost of CFCs. **Consequently**, a black market in imported illicit CFCs has grown." The word "consequently" creates a direct causal link between the high price of substitutes and the growth of the black market.
- (A) The passage says most illicit CFCs originate in India and China. While stopping production there would disrupt the supply, the passage doesn't go so far as to suggest the trade would completely "cease." This is a prediction not explicitly made in the text.
- (B) The passage mentions a survey where 48% did not believe CFCs damage the ozone. 48%

is a large minority, but it is not "most people."
- (C) The passage says CFC-12 is "second only to illicit drugs," meaning it is currently smaller. It gives no information to suggest it will surpass drugs in the future.
- (D) This is a direct paraphrase of the cause-and-effect relationship established in the passage. The high price of substitutes creates demand for cheaper, illicit CFCs, thus "fostering" the trade.
- (E) The passage attributes the growth of the illicit market to demand for cheap alternatives in places like the U.S., not to industry expansion in foreign countries.

Step 3: Final Answer:
The passage most strongly supports the idea that the black market is driven by the desire to avoid the high cost of legal substitutes. This corresponds to option (D).

Quick Tip

Pay close attention to cause-and-effect keywords like "consequently," "therefore," "because," and "as a result." They often point directly to the reasons behind the events described in the passage.

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33. A study shows that employees who work from home tend to be more productive. A company is considering allowing employees to work from home at least three days a week. Which of the following, if true, would most strengthen the company's argument?

(A) The study was conducted in a similar industry to the company's.
(B) Employees who work from home tend to take more breaks.
(C) The company's employees have been reporting high levels of job satisfaction.
(D) The study shows that productivity levels decline after employees work from home for more than three days a week.

Correct Answer: (A) The study was conducted in a similar industry to the company's.

Solution:

Step 1: Understanding the Concept:
This is a Critical Reasoning question asking to strengthen an argument. The argument uses evidence from a study to support a business decision. To strengthen the argument, we need to reinforce the connection between the evidence (the study) and the conclusion (the company's plan).

Step 2: Detailed Explanation:
The company's argument is: A study shows WFH is more productive, therefore our company should adopt WFH. The unstated assumption is that the study's results are applicable to this specific company.
- (A) If the study was conducted in a similar industry, it makes it much more likely that the

results are relevant and applicable to this company. This directly strengthens the logical bridge between the evidence and the conclusion.
- (B) Taking more breaks would suggest lower, not higher, productivity, which would weaken the argument.
- (C) High job satisfaction is a positive factor but doesn't directly support the claim that the WFH plan will increase *productivity* based on the external study.
- (D) This information weakens the argument. The company's plan is for "at least three days," which could include four or five. If the study shows productivity declines after three days, the plan could be counterproductive.

Step 3: Final Answer:
The best way to strengthen an argument based on an analogy or an external study is to show that the subjects of comparison are similar. Option (A) does this perfectly.

Quick Tip

When an argument relies on a study, survey, or experiment, the most effective way to strengthen it is to show the study was well-conducted and relevant (e.g., large, representative sample; similar conditions). The most effective way to weaken it is to show the study was flawed or irrelevant.

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34. "Over the past century, human civilization has seen dramatic shifts in urbanization.Cities have grown larger, and more people have moved to urban areas for better access to education, jobs, and healthcare. However, this rapid growth has created challenges such as overcrowding, pollution, and strain on infrastructure." Based on the passage, which of the following statements is most supported by the author's argument?"

(A) Urbanization has had only negative consequences for society.
(B) More people are moving to urban areas due to the lack of rural opportunities.
(C) Urbanization has both positive and negative consequences.
(D) Urbanization is likely to decrease in the near future.

Correct Answer: (C) Urbanization has both positive and negative consequences.

Solution:

Step 1: Understanding the Concept:
This question asks to identify the statement that best summarizes or is most directly supported by the provided passage.

Step 2: Detailed Explanation:
The passage presents a balanced view of urbanization.
- It first lists the positive aspects or reasons for urbanization: "better access to education, jobs, and healthcare."

- It then lists the negative aspects or "challenges": "overcrowding, pollution, and strain on infrastructure."
Now let's evaluate the options:
- (A) is incorrect because the passage explicitly mentions positive drivers like jobs and education.
- (B) is a possible inference but not what the passage focuses on. The passage states the "pull" factors of cities, not the "push" factors of rural areas.
- (C) perfectly captures the dual nature of the author's argument, acknowledging both the positive drivers and the negative challenges mentioned in the text.
- (D) is incorrect as the passage provides no information about future trends.

Step 3: Final Answer:
The statement that accurately reflects the entire content of the author's argument is that urbanization has both positive and negative sides. This corresponds to option (C).

Quick Tip

For questions asking what a passage supports, look for the answer choice that encapsulates the overall message, rather than focusing on just one part of it. A balanced passage will be supported by a balanced summary.

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35. The director of a museum claims that visitors will be more likely to attend an exhibition if it is promoted through social media. Which of the following assumptions is necessary for the director's claim to be valid?

(A) People who use social media are more likely to visit the museum.
(B) Social media promotions are always effective.
(C) The exhibition is of interest to a broad audience.
(D) People visit museums primarily because of social media posts.

Correct Answer: (A) People who use social media are more likely to visit the museum.

Solution:

Step 1: Understanding the Concept:
This is a Critical Reasoning question that asks for a necessary assumption. A necessary assumption is an unstated premise that must be true for the conclusion to logically follow from the evidence. A good test is the "negation test": if the negated assumption makes the argument fall apart, it is necessary.

Step 2: Detailed Explanation:
The argument is: Promoting on social media $\rightarrow$ Visitors are more likely to attend.
The argument connects the action (promotion on social media) to the outcome (attendance). It assumes that the target of the action (social media users) is a group that is at least somewhat inclined to perform the desired outcome (visit the museum).

Let's test the options with negation:
- (A) Negated: "People who use social media are **not** more likely to visit the museum." If the audience you are promoting to is not inclined to visit, then promoting to them will not make them more likely to attend. This breaks the argument's logic. Therefore, (A) is a necessary assumption.
- (B) Negated: "Social media promotions are **not** always effective." The argument can still be valid even if some promotions fail. It only needs this specific promotion to have a chance of working. The word "always" makes this assumption unnecessary.
- (C) Negated: "The exhibition is **not** of interest to a broad audience." The promotion could still be effective if it reaches a niche audience on social media that is interested.
- (D) Negated: "People do **not** visit museums primarily because of social media." The claim is only that promotion makes them "more likely" to attend, not that it's the main reason. The argument holds even if social media is only a minor influence.

Step 3: Final Answer:
The argument relies on the assumption that the group being targeted by the promotion (social media users) has some overlap with the group of potential museum visitors. Option (A) states this necessary link.

Quick Tip

Use the Negation Test for assumption questions. State the opposite of the answer choice and see if the original argument still makes sense. If the argument is destroyed, you have found the necessary assumption.

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36. According to the passage [from question 32], which of the following best describes most ozone-depleting chemicals in 1996 as compared to those in 1987?

(A) The levels of such chemicals in the atmosphere had decreased
(B) The number of such chemicals that reached the atmosphere had declined
(C) The amounts of such chemicals released had increased but the amounts that reached the atmosphere had decreased
(D) The rate of increase in amounts of such chemicals reaching the atmosphere had decreased.
(E) The rate at which such chemicals were being reduced in the atmosphere had slowed.

Correct Answer: (D) The rate of increase in amounts of such chemicals reaching the atmosphere had decreased.

Solution:

Step 1: Understanding the Concept:
This question requires you to locate a specific detail in the passage from question 32 and choose the answer choice that paraphrases it most accurately. The passage was written in 1996, and the protocol was signed in 1987, so the question is asking about the effect of the protocol.

Step 2: Detailed Explanation:
The relevant sentence in the passage is: "[The Montreal Protocol] has attained its short-term goals: it has **decreased the rate of increase in amounts of most** ozone-depleting chemicals reaching the atmosphere and has even reduced the atmospheric levels of some of them."
The question asks about "most" ozone-depleting chemicals. The first part of the sentence directly addresses this.
- (A) is incorrect. The passage says the levels of only "*some*" of them had decreased, not most.
- (B) is incorrect. The passage refers to the "amounts" or "levels," not the "number" (variety) of chemicals.
- (C) is incorrect. The passage does not state that the amounts released had increased.
- (D) is a nearly perfect paraphrase of the first part of the key sentence: "it has decreased the rate of increase in amounts of most... chemicals". This means the amounts were still growing, but more slowly than before.
- (E) is incorrect. The passage does not mention the rate of reduction slowing down.

Step 3: Final Answer:
The passage explicitly states that for most chemicals, the rate of increase had slowed down. This corresponds to option (D).

Quick Tip

For "according to the passage" questions, always go back to the text and find the exact sentence or phrase that supports your answer. Be wary of answer choices that use absolute words like "all" or "none," or that misinterpret specific quantifiers like "some" vs. "most."

Data Insights

37. Is the number x even?
(1) x + 1 is odd.
(2) x is greater than 0.

(A) Statement (1) alone is sufficient.
(B) Statement (2) alone is sufficient.
(C) Both statements together are sufficient.
(D) Each statement alone is not sufficient.

Correct Answer: (A) Statement (1) alone is sufficient.

Solution:

Step 1: Understanding the Concept:
This is a Data Sufficiency question concerning the properties of integers (even and odd). The question asks for a definitive "Yes" or "No" answer. Consecutive integers alternate between

odd and even.

Step 2: Detailed Explanation:
Evaluating Statement (1) Alone:
"x + 1 is odd."
If a number is odd, the integer immediately preceding it must be even. The integer immediately preceding $x + 1$ is x.
For example, if $x + 1 = 5$ (an odd number), then $x = 4$ (an even number). If $x + 1 = -3$ (an odd number), then $x = -4$ (an even number).
This is always true. Therefore, we can definitively answer "Yes, x is even."
Statement (1) alone is sufficient.

Evaluating Statement (2) Alone:
"x is greater than 0."
This means x could be any integer like 1, 2, 3, 4, and so on.
- If we choose $x = 1$, then x is odd. The answer is "No."
- If we choose $x = 2$, then x is even. The answer is "Yes."
Since we cannot get a single definitive answer, Statement (2) alone is not sufficient.

Step 3: Final Answer:
Since Statement (1) is sufficient and Statement (2) is not, the correct answer is (A).

Quick Tip

In number properties Data Sufficiency questions, remember the rules: Even + 1 = Odd; Odd + 1 = Even. If you know the parity (evenness or oddness) of $x+1$, you automatically know the parity of x.

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38. A store sells a hat for $20 and a scarf for $15. A customer buys both. What is the total cost after a 10% discount on the hat?

(A) $30
(B) $31
(C) $32
(D) $33

Correct Answer: (D) $33

Solution:

Step 1: Understanding the Concept:
This problem involves calculating a percentage discount and then finding the sum of the prices of two items.

Step 2: Detailed Explanation:
1. **Calculate the discount on the hat.**
The discount is 10% of the hat's price, which is \$20.

$$\text{Discount} = 10\% \times \$20 = 0.10 \times 20 = \$2$$

2. **Calculate the new price of the hat.**
The new price is the original price minus the discount.

$$\text{Hat Price} = \$20 - \$2 = \$18$$

3. **Calculate the total cost.**
The total cost is the sum of the discounted hat price and the scarf price.

$$\text{Total Cost} = (\text{New Hat Price}) + (\text{Scarf Price})$$

$$\text{Total Cost} = \$18 + \$15 = \$33$$

Step 3: Final Answer:
The total cost for the customer is \$33. This corresponds to option (D).

Quick Tip

Read the question carefully to see what the discount applies to. Here, the 10% discount is *only* on the hat, not the total purchase. A common mistake is to calculate the discount on the total amount.

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39. What is the monthly rent for a certain apartment?
(1) The monthly rent per person for 4 people to share the rent for the apartment is \$375.
(2) The monthly rent per person for 4 people to share the rent of the apartment is \$125 less than the monthly rent per person for 3 people to share the rent.

(A) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
(B) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
(C) BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
(D) EACH statement ALONE is sufficient.
(E) Statements (1) and (2) TOGETHER are NOT sufficient

Correct Answer: (D) EACH statement ALONE is sufficient.

Solution:

Step 1: Understanding the Concept:
This is a Data Sufficiency question where we need to determine if the given statements provide enough information to find a unique value for the total monthly rent. Let R be the total

monthly rent.

Step 2: Detailed Explanation:
Evaluating Statement (1) Alone:
"The monthly rent per person for 4 people to share the rent... is \$375."
This can be written as an equation:

$$\frac{R}{4} = \$375$$

We can solve this equation for R by multiplying both sides by 4:

$$R = 375 \times 4 = \$1500$$

Since we can find a single, unique value for the rent, Statement (1) alone is sufficient.

Evaluating Statement (2) Alone:
"The monthly rent per person for 4 people... is \$125 less than the monthly rent per person for 3 people..."
The rent per person for 4 people is $R/4$.
The rent per person for 3 people is $R/3$.
The statement translates to the equation:

$$\frac{R}{4} = \frac{R}{3} - 125$$

This is a single equation with one variable, R. We can solve for R.
To eliminate the fractions, multiply the entire equation by the least common multiple of 4 and 3, which is 12:

$$12\left(\frac{R}{4}\right) = 12\left(\frac{R}{3}\right) - 12(125)$$
$$3R = 4R - 1500$$
$$1500 = 4R - 3R$$
$$R = \$1500$$

Since we can find a single, unique value for the rent, Statement (2) alone is sufficient.

Step 3: Final Answer:
Both Statement (1) and Statement (2) are sufficient on their own to determine the total monthly rent. Therefore, the correct answer is (D).

Quick Tip

In Data Sufficiency, you don't need to actually solve the problem completely if you can see that a unique solution exists. For Statement (2), once you set up the equation $\frac{R}{4} = \frac{R}{3} - 125$, you can recognize it's a linear equation with one variable and conclude that it's solvable for R, making the statement sufficient.

40. According to the table shown, the estimated number of home-schooled students in State A is approximately what percent greater than the number in State D ?

State	Number (in thousand)
A	181
B	125
C	103
D	79
E	72

(A) 25%
(B) 55%
(C) 100%
(D) 125%
(E) 155%

Correct Answer: (D) 125%

Solution:

Step 1: Understanding the Concept:
This problem requires calculating the percentage increase from one value to another using data from a table. The formula for "percent greater than" or "percent increase" is crucial.

Step 2: Key Formula or Approach:
Percent Greater $= \frac{\textbf{New Value}-\textbf{Original Value}}{\textbf{Original Value}} \times 100\%$
In this context, the number of students in State A is the "New Value," and the number in State D is the "Original Value" because we are asking how much greater A is *than D*.

Step 3: Detailed Explanation:
From the table:
- Number of students in State A = 181 thousand.
- Number of students in State D = 79 thousand.

1. **Find the difference (the amount of increase).**

$$\text{Increase} = 181 - 79 = 102 \text{ thousand}$$

2. **Divide the increase by the original value (State D's number).**

$$\frac{102}{79}$$

3. **Approximate the result and convert to a percentage.**
To make the division easier, we can approximate 79 as 80.

$$\frac{102}{79} \approx \frac{102}{80} = \frac{10.2}{8} = 1.275$$

Converting this decimal to a percentage:

$$1.275 \times 100\% = 127.5\%$$

This value is very close to 125%.

Step 4: Final Answer:
The number of students in State A is approximately 125% greater than the number in State D. This corresponds to option (D).

Quick Tip

For "percent greater than X" problems, always remember that the value of X is the denominator of the fraction. A common error is to divide by the wrong number. Approximating the denominator to a round number (like 79 to 80) is a great strategy for quickly estimating the answer in multiple-choice questions.
