



GMAT

Quant Section Test

[PERCENT]

- Solutions

1. **Solution:**

Topic: Arithmetic

Concept Tested: Percent

Type of Question: Data Sufficiency (DS)

Question: To calculate the percent of the students, who study French?

Statement I is insufficient:

Given: Exactly 40 percent of the boys and 55 percent of the girls in school X study French.

Since we need to calculate what percent of the total students study French, statement I will not help us unless we know what percentage of students are boys or girls.

Therefore, Statement I by itself is insufficient to answer the question.

So, eliminate A and D.

The answer is either B, C or E.

Statement II is sufficient:

Given: At School X, the ratio of the number of students who study French to the number of students who do not study French is 9 to 11

The students should either study French or they should not, that is we have only two groups.

This means the students study French and the students not studying French make up $\frac{9}{20}$ and $\frac{11}{20}$ of the total respectively, and that the students study French are 45% of the total.

Therefore, Statement II by itself is sufficient to answer the question.

So, eliminate C and E.

Hence, the answer is B.

2. **Solution:**

Topic: Arithmetic

Concept Tested: Percent Change (Increase/Decrease)

Type of Question: Data Sufficiency (DS)

Given: Alex (A) and Bob's (B) salary decreased by $x\%$ from 2001 to 2003.

$$\text{i.e. } A \left(1 - \frac{x}{100}\right) \text{ \& } B \left(1 - \frac{x}{100}\right)$$

Question: To find x .

Statement I is insufficient:

Given: In 2001 Alex earned \$2,500 more than Bob.

According to this statement, $A - B = 2500$

Obviously, this is insufficient, since there is no information about ' x '.

Therefore, Statement I by itself is insufficient to answer the question.

So, eliminate A and D.

The answer is either B, C or E.

Statement II is insufficient:

Given: In 2003 Alex earned \$2,225 more than Bob.

From this statement, we can deduce the below equation:

$$A \left(1 - \frac{x}{100}\right) - B \left(1 - \frac{x}{100}\right) = 2225 .$$

Since we have three unknowns A, B and ' x ', we will not be able to find ' x '.

Therefore, Statement II by itself is insufficient to answer the question.

So, eliminate B.

The answer is either C or E.

Combine both Statements:

Simplifying the 2nd statement, we get

$$\left(1 - \frac{x}{100}\right) (A - B) = 2225$$

From the 1st statement, we get the value of A-B as 2500.

$$\left(1 - \frac{x}{100}\right) (2500) = 2225$$

We are least bothered to calculate the value of ' x ', but for sure we will get one value of ' x '.

Therefore, combining the statements I and II is sufficient to answer the question asked.

So, eliminate E.

Hence, the answer is C.

3. **Solution:****Topic: Arithmetic****Concept Tested: Percent Change (Increase/Decrease)****Type of Question: Problem Solving (PS)**

To make a 25% profit on \$60, one needs to sell it for \$75.

Mathematically, to give a discount of 25% and to get \$75.

$$\text{Retail} - 25\% (\text{of Retail}) = 75$$

$$\frac{3}{4}(\text{Retail}) = 75$$

$$\text{Retail} = 100$$

Hence, the answer is E.

4. **Solution:**

Topic: Arithmetic

Concept Tested: Word Problem, Percent Change

Type of Question: Data Sufficiency (DS)

Given: Every month, rate of change is increasing, Alan decides to reduce the number of days in such a way that amount he spends remains unchanged.

Question: Percentage by which the number of days reduces each month.

Statement I is insufficient:

Given: The initial number of days he uses the garage before increase in the rate is 20 days in a month. This statement gives the initial number of days only

Therefore, Statement I by itself is insufficient to answer the question.

So, eliminate A and D.

The answer is either B, C or E.

Statement II is insufficient:

Given: The parking garage is increasing its rates by 15 percent per month.

Let's us say that "x" the old number of days, "X" the new number of days, and r the old rate.

In order for the old price to equal the new price,

$xr = 1.15Xr$ (A quick way to represent at 15% increase is to just multiply by 1.15.)

By canceling the r variable, we are left with

$x = 1.15X$.

To find the "percentage reduction," we must find

$$\frac{x - X}{x} * 100$$

Or

$$1 - \frac{X}{x} * 100$$

Or

$$1 - \frac{1}{1.15} * 100$$

Solving the above expression we will get our answer.

Therefore, Statement II by itself is sufficient to answer the question.

So, eliminate C and E.

Hence the answer is B.

5. **Solution:**

Topic: Arithmetic

Concept Tested Word Problem, Percent Change, Fractions

Type of Question: Problem Solving (PS)

Given: Of the 1421 employees of a newspaper company, $\frac{2}{7}$ are editors. Half of the editors were laid off.

$\frac{1}{7}$ portion represents $(1421 / 7)$ 203 employees are laid off. This, in turn means that 406 employees are editors and the remaining employees are 1015.

The total remaining workers are $203+1015 = 1218$.

$$\frac{203}{1218} * 100$$

This number as a percentage is answer choice B, 16.67%.

Hence, the answer is B.

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