**GMAT Quantitative: Data Sufficiency**

1. If a car salesman earns a commission of 5% on each vehicle he sells, how much did he earn in total during the month of May?

1) The car salesman sold 15 cars during the month of May.   
2) The average sale price on vehicles sold in May was $10,000.

A) Statement 1 alone is sufficient, but statement 2 is not sufficient.   
B) Statement 2 alone is sufficient, but statement 1 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: C

Explanation: Statement 1 is not sufficient on its own, because the number is not enough to determine the values of the vehicles sold.   
Statement 2 is not sufficient on its own, because it does not reveal the quantity of the vehicles sold.   
Both statements are needed to determine the commission earned by the car salesman during the month of May.

2. One hundred grade 12 chemistry students took a final exam. Was the average score higher than 60%?

1) Over 50% of the people who wrote the test scored at least 65%.   
2) 22% of the class scored 80%, while 25% scored below 50%.

A) Statement 1 alone is sufficient, but statement 2 is not sufficient.   
B) Statement 2 alone is sufficient, but statement 1 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: E

Explanation: Statement 1 only gives information about 50% of the class. An average can not be determined based on this value.

Similarly, statement 2 does not give information about an adequate number of individuals who wrote the test to allow the overall average to be determined.

3. Is t < r?

1) t and r are fractions   
2) 500t > 500r

A) Statement 1 alone is sufficient, but statement 2 is not sufficient.   
B) Statement 2 alone is sufficient, but statement 1 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: B

Explanation: Statement 1 is not relevant to the question being asked. Statement 2, however, can be used to answer the question. Both sides can simply be divided by 500 to determine whether t is less than or greater than r.

4. A triangle has an angle of 45 degrees. What are the measurements of the remaining angles?

1) The triangle is a right triangle.   
2) The perimeter of the triangle is 45cm.

A) Statement 1 alone is sufficient, but statement 2 is not sufficient.   
B) Statement 2 alone is sufficient, but statement 1 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: A

Explanation: It is known that one of the angles is 45 degrees. The statement that the triangle is a right triangle indicates that another one of the angles is 90 degrees. Since the angles in a triangle add up to 180 degrees, it is a simple matter of determining the missing value.   
Statement 2 is not relevant to the question. The perimeter of a triangle cannot be used to determine its angles.

5. If x is squared, is the resultant value greater than 60?

1) x is a negative integer.   
2) x + 60 is less than 60.

A) Statement 1 alone is sufficient, but statement 2 is not sufficient.   
B) Statement 2 alone is sufficient, but statement 1 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: E

Explanation: The two statements combined do not provide enough information. The fact that x is a negative integer does not help to answer the question because when negative numbers are squared, the answer is a positive number. Statement 2 does not give useful information either. Since x is negative, adding 60 would always result in a value less than 60. Therefore, the question can not be answered by using the information provided.