# Ratio and Proportion
# CAT Questions

**Example 1: The average marks of Ravi in 10 papers are 80. If the lowest and highest scores in the exam are not considered, then the average is 81. If the highest score is 92, what is Ravi's lowest score?**

1. 60
2. 55
3. 62
4. Cannot be determined

**Answer:** Correct answer is 60

**Solution:**

Total marks=80x10=800

Total marks without lowest and highest marks=81x8=648

So, the summation between lowest and highest marks= 800-648=152

Now the highest mark is 92, so, the lowest marks will be: 152-92= 60

**Example 2: One bacterium split into eight bacteria of the next generation. But due to environmental condition, only 50% survives, and the remaining 50% dies after producing the next generation. If the 7th generation number is 4096 million, then find the number for the first generation.**

1. 2 million
2. 4 million
3. 1 million
4. 8 million

**Answer:** The correct answer is 1 million

**Solution:**

Suppose the initial number of bacteria= x

So, in the 2nd generation, the number of bacteria=8x/2=4x

In the 3rd generation the number of bacteria= 16x

4th generation=64x

5th generation=256x

6th generation=1024x

7th generation=4096x

Hence, the value of x=1 million