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**Part 1:**

Step 1

1. The observed reliability is 90.94%.
2. The execution time of the brute force implementation is 285.289s / 10000 = 28.5289ms.

Step 2

1. The observed reliability is 72.55%.
2. The execution time of the brute force implementation is 0.203s / 10000 = 0.0203ms.

Step 3

1. Using a Recovery Block of these two implementations, from above we know the reliability of SubsetSum is 90.94%, the reliability of SubsetSumDP is 72.55%, the theoretical reliability is:



1. If having SubsetSum go first, we know the approximate execution time of SubsetSum is 28.5289ms and the execution time of SubsetSumDP is 0.0203ms, so :



1. If having SubsetSumDP go first , the approximate executing time is:



Step 4