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| **Program No.** | **Program Topic** | **Program Title** | **Page No** |
| 1 | The Foundations:  Logic and Proof | The 3x+1 Conjecture: Let T be the transformation that sends an even integer x to x/2 and an odd integer x to 3x + 1. A famous conjecture, sometimes known as the 3x + 1 conjecture, states that for all positive integers x, when we repeatedly apply the transformation T, we will eventually reach the integer 1. | 01 |
| 2 | Basic Structures: Sets | Given subsets A and B of a set with n elements, find A, A ∪ B, A ∩ B, A – B and A ⊕ B. | 02 |

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