

## E-Problem 1 [Camping Problem]

Five colleges went to camping on public school ground: VIT, SRM, Manipal, KIIT and BITS. The smallest contingent from the five schools was greater than 20 but less than 30. VIT sent two less than half of the SRM contingent. The Manipal and SRM contingents together were 14 greater than the combined KIIT and BITS contingents. The KIIT and SRM contingents together were two less than half the total complement from the five schools while the BITS and Manipal contingents combined were  $\frac{13}{32}$  of that total. **What was the strength of each contingent?**

- Add the requirement "The smallest contingent from the five schools was greater than 20 but less than 30" as an explicit constraint to the problem.
- Verify that the linear formulation in question 1 is correct.
- Is the solution found the unique solution? Check!
- Add the requirement that at least two contingents must be between 30 and 40.