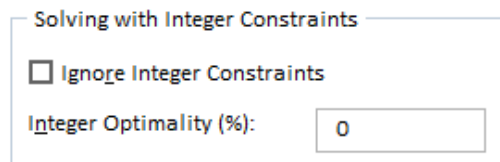# Integer Programming

- Integer programming models are harder to solve than linear programming models.
  - It takes longer for Solver to find a solution for integer programming problems.
  - Sometimes Solver can only find a <u>close-to-optimal</u> solution.

- In Solver → Options,

```
┌─ Solving with Integer Constraints ──────────
│
│  ☐ Igno͟re Integer Constraints
│
│  In͟teger Optimality (%):        [  0      ]
│
└─────────────────────────────────────────────
```

Integer Programming

- Integer variables
  - Examples: number of ads, etc.
- Binary variables (0-1 variables)
  - Examples: whether a social link is on the shortest path or not, whether Netflix should open a distribution center in South Bend or not, etc.