## 1 Three structured problems

Organising a table tennis tournament


You have the job of organising a table tennis tournament.

- 7 players will take part
- All matches are singles.
- Every player has to play each of the other players once.

1. Call the players A, B, C, D, E, F, G

Complete the list below to show all the matches that need to be played.
$A \vee B$
$B \vee C$
AvC
$B \vee D$
....
....
2. There are four tables at the club and each game takes half an hour.

The first match will start at 1.00 pm .
Copy and complete the poster below to show the order of play, so that the tournament takes the shortest possible time.
Remember that a player cannot be in two places at once!
You may not need to use every row and column in the table!

| Start <br> Time | Table on which the game will be played |  |  |  |
| :--- | :---: | :--- | :--- | :--- |
|  | 1 | 2 | 3 | 4 |
| 1.00 | A $\vee \mathrm{B}$ |  |  |  |
| 1.30 |  |  |  |  |
| 2.00 |  |  |  |  |
| 2.30 |  |  |  |  |
| 3.00 |  |  |  |  |
| 3.30 |  |  |  |  |
| 4.00 |  |  |  |  |
| 4.30 |  |  |  |  |

