**1** Section 1.2: Practice exercises 2 and Exercises 17, 19, 29, 31.

**2** Section 1.3: Practice exercises 2 and 3. + Exercises 11, 19, 21.

**3** This is a (very) basic illustration of recommender systems. Suppose you have 4 people (e.g., John, Mary, Karen, and Paul) who share information about their likes or dislikes of movies.

Three of them rated 4 movies (A to D) but Paul rated movies A to C only – (see table to the right). What is you best guess of Paul's rating for title D?

|   | J | M | K | P |
|---|---|---|---|---|
| A | 4 | 2 | 5 | 4.5 |
| B | 3 | 4.5 | 1 | 2 |
| C | 4 | 2 | 4 | 3.5 |
| D | 1 | 3 | 1 | ?? |

Hint: Express ratings for P for titles A, B, C as linear combinations of ratings of the same titles from J, M, K. Then use the same combination to rate D for Paul