

Solutions

Each answer shows the steps, then the **result**.

2.1

- keeps only the rows (records) that meet a **condition**, and removes the rest

2.2

- **transform**

2.3

- filter to grade 10 **and** club = music, then **count** the rows
- only Chen: **1** student

2.4

- $40 \rightarrow 100$, 19 fails, $24 \rightarrow 60$: **[100, 60]**

3.1 A

- after sorting by plays, the first rock row is the most played rock song

3.2 B

- the shared ID field joins each name to its mark

3.3 A

- 8 and 10 are even; times 3 gives 24 and 30

3.4

(a)

- **filter** the records to those where the name is Ana
- **sum** the distance field of the remaining records

(b)

```
fast ← []
FOR EACH r IN runs
{
    IF(r.distance / r.minutes * 60 > 12)
    {
        APPEND(fast, r.name)
    }
}
```

- loop over every record
- the speed test > 12
- APPEND the **name** to **fast**

(c) any one:

- a line chart of each member's times shows whether they are **improving**
- a bar chart of distances shows who trains **most** or least