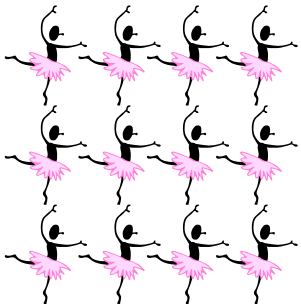
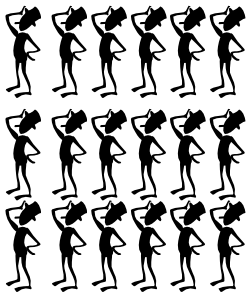
Simplifying ratios

We can often make the numbers in ratios **smaller** so that they are **easier** to compare. To do this **divide** each side of the ratio by the **same** number, the **highest common factor**. This is called **simplifying.**

Example: the ratio of female to male members in a club is 12:18.



12



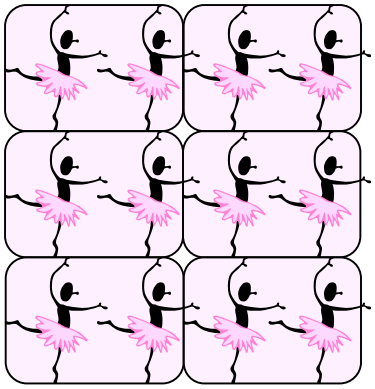
18

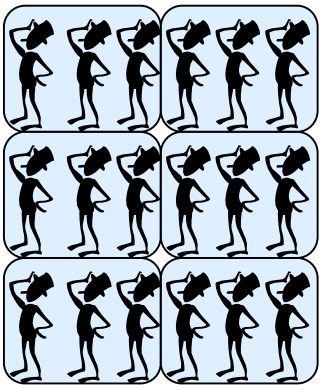
Both 12 and 18 can be divided by 2:

12 ÷ 2 = 6

18 ÷ 2 = 9

So a simpler way of saying **12:18** is **6:9**.





To make the ratio simpler again, we can divide both 6 and 9 by 3:

6 ÷ 3 = 2

9 ÷ 3 = 3

So a simpler way of saying **12:18** is **2:3**.

These are all **equivalent ratios** - they are in the **same proportion**. All these ratios mean that for every 2 female members in the club there are 3 males:

12:18

6:9

2:3

2:3 is easier to understand than 12:18.