0.1 Subtraction

Subtraction with amounts

When removing a part of an amount, we use the symbol $-$:

$$5 - 3 = 2$$

The language box

A calculation involving subtraction includes one or more *terms* and one *difference*. In the calculation

$$5 - 3 = 2$$

both 5 and 3 are terms while 2 is the difference.

Common ways of saying $5 - 3$ is

- "5 minus 3"

- "3 subtracted from 5"


A new interpretation 0

As mentioned earlier in this book, 0 can be interpreted as "nothing". However, subtraction gives brings the possibility of expressing 0 by other numbers, for example is $7 - 7 = 0$ and $19 - 19 = 0$. In many practical situations, 0 indicates some form of equilibrium, like two opposite (in direction) forces of equal magnutide.

Subtraction on the number line: Moving to the left

I *Section ??*, we have seen that $+$ (with positive numbers) involves moving *to the right* on the number line. With $-$ it's the opposite, we move *to the left*[1]:

Example 1

$$6 - 4 = 2$$

4

2   3   4   5   6

Example 2

$$12 - 7 = 5$$

7

5   6   7   8   9   10   11   12
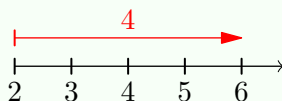
Notice

At first it may seem a bit odd moving in the opposite direction of the way in wich the arrows point, as in *Example 1* og *2*. However, in *Chapter ??* this will turn out to be useful.

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[1] In figures with number lines the red colored arrows indicates that one shall start at the arrow head and move to the other end.