Page 17. Lemma 0.1 should read as follows:

**Lemma 0.1**
For all natural numbers \( m \) and \( n \), where \( m \neq 0 \), we have

\[
n = m \cdot (n \text{ div } m) + (n \text{ mod } m).
\]

Page 20. Lemma 0.2 should read as follows:

**Lemma 0.2**
For all integers \( n \), and all integers \( m \neq 0 \), we have

\[
n = m \cdot (n \text{ div } m) + (n \text{ mod } m).
\]

Page 21. It turns out that the implementation of mod in Java does not work in the same way our mathematical definition does. I have amended Code Example 0.1 as follows.

**Code Example 0.1.** In Java integer division is implemented. Here is a procedure that returns the result of dividing \( n \) by \( m \) (as integers).

```java
public static int intdiv (int n, int m)
{
    return n/m;
}
```

Similarly there is an implementation of the remainder of dividing \( n \) by \( m \).

```java
public static int intmod (int n, int m)
{
    return n % m;
}
```

Note, however, that this does not return the numbers that appears in our definition: If \( n \) is negative then \( n \% m \) is a negative number. The way Java implements the two operations ensures that they satisfy Lemma 0.2, that is

\[
n = m \ast (n/m) + n\%m.
\]

The result of the Java expression \( n \% m \) is ‘equivalent modulo \( m \)’ to the result of \( n \mod m \), see Section 7.3.6. This means that for negative \( n \) you can get

\[
n \mod m \quad \text{by adding } m \text{ to } n \% m.
\]
Page 75. Example 2.22 should read as follows:

**Example 2.22.** In order to refute the claim that for all natural numbers \( m \) and \( n \) it is the case that \( m - n = n - m \), it is sufficient to find one counterexample, so by merely writing \( 2 - 1 = 1 \neq -1 = 1 = 2 \), we have proved that the claim does not hold.

Page 106. In Example 2.67 the diagram and the text don’t fit together. What I intended is the following.

**Example 2.67.** Consider the function given by the following diagram.

\[
\begin{array}{cccc}
& c & \rightarrow & \bullet 4 \\
& b & \rightarrow & \bullet 3 \\
& a & \rightarrow & \bullet 2 \\
\end{array}
\]

This function is not surjective since there is no element of the source set that is mapped to the element 4 of the target set.

Page 130. CExercise 50 isn’t worded very well. Here is an improved version.

Suppose we have a deck of four cards,

\[ \{Q♠, A♠, Q♥, A♥\} \]

I draw two cards from this pack so that I can see their values, but you cannot. You tell me to drop one of my cards, and I do so.

You ask me whether I have the ace of spades \( A♠ \), and I answer yes.

What is the probability that the card I dropped is also an ace?

Page 142. Example 4.25 does not describe the probability space from Exercise 50. The probability space for that exercise is given as follows:
Example 4.25. The probability space underlying Exercise 50 has as its underlying sample space the set

\[
\{\{Q\heartsuit, A\diamondsuit\}, \{Q\heartsuit, Q\spade}\}, \{Q\heartsuit, A\spade}\}, \{A\diamondsuit, Q\spade\}, \{A\diamondsuit, A\spade\}, \{Q\spade, A\spade\}\},
\]

and the probability for each outcome is 1/6. The probability distribution is derived from this in the usual way.