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## **Module 5a: Naturals**

CPSC 110

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## Module 5a: Naturals

### Learning goals

- Be able to design functions that operate on natural numbers.
- Be able to design a simple alternative representation for natural numbers.

### Notes

For the `Natural` data definition in `01-naturals-starter.rkt`:

- Template rules wouldn't normally put `n` by itself in the template, but because our funny "compound" data does NOT have a `(first lon)` equivalent, we end up adding `n` ourselves.
  - There must be a way for the first element to **contribute its result!**

For `to-list` with signature `Natural -> ListOfNatural` in `01-naturals-starter.rkt`:

- Since `ListOfNatural` is the produced type (as opposed to the consumed type), and the type is so simple, we do not need to write a template for it.

### Terminology

- `x`