MODULE *Example7_ArcWeights*

Petri Net with arc weights. A weight represents how many tokens must be consumed from input places and how many tokens will be produced at output places when a transition fires. Unspecified arc weights default to 1.

```
                  ------
source --2--> |  t1  | --3--> sink
                  ------  -----> other
```

$Places \triangleq \{\text{“source”}, \text{“sink”}, \text{“other”}\}$ Define the net.
$Transitions \triangleq \{\text{“t1”}\}$
$Arcs \triangleq [$
$\quad source \mapsto \{\text{“t1”}\},$
$\quad t1 \mapsto \{\text{“sink”}, \text{“other”}\}$
$]$
Unspecified arc weights default to 1.
$ArcWeights \triangleq \langle$
from, to, weight
$\langle \text{“source”}, \text{“t1”}, 2\rangle,$
$\langle \text{“t1”}, \text{“sink”}, 3\rangle$
$\rangle$
$InitialMarking \triangleq [source \mapsto 2]$
VARIABLE *Marking*

$PN \triangleq$ INSTANCE *PetriNet* Instantiate it within a namespace.

$Spec \triangleq PN!Spec$ Make *Spec* and *Invariants* available for the config file.

$Invariants \triangleq PN!Invariants$

Properties

Eventually, we arrive as a expected final marking.
$FinalMarking \triangleq PN!FinalMarking([sink \mapsto 3, other \mapsto 1])$