

Exercise 3

Here only pseudo code (MOD shall be the modulo function, i. e. the division remainder function):

```
ALGORITHM ChildCountRhyme
BEGIN
  VARIABLE startChild, numSyll,
    numOutside, count TYPE Integer
  CONSTANT numChild TYPE Integer VALUE ...
  VARIABLE childArray TYPE
    Text-ARRAY[numChild]
  Read numChild children's names into
    childArray[0] until childArray[numChild - 1]
  Read startChild, numSyll
  numOutside ← 0
  IF startChild ≠ 0 THEN
    count ← startChild - 1
  ELSE count ← numChild - 1
  WHILE numOutside < numChild - 1 DO
    REPEAT numSyll-times
      count ← (count + 1) MOD numChild
      WHILE childArray[count] empty DO
        count ← (count + 1) MOD numChild
      Write childArray[count], delete name
      numOutside ← numOutside + 1
    DO
      count ← (count + 1) MOD numChild
  WHILE childArray[count] empty
  Write: "Child childArray[count] is the winner"
END
```