

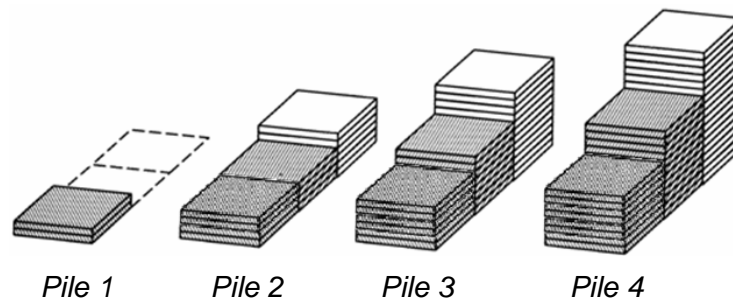
Beantwoord al die vrae

E-pos die volgende *drie* aanhangsels teen 11:30 aan aio@sun.ac.za:

1. "MyTiles.xls" (vraag 1)
2. "MyInflation.xls" (vraag 2)
3. "MyWord.doc", wat al jou nie-Excel antwoorde bevat.

QUESTION 1

The sketch shows the first four piles in a sequence of tiles, each consisting of three rows:



[Open the Tiles.xls](#) workbook which illustrates the growth of the tile pattern numerically and graphically, and also provides an algebraic tile calculator.

- (a) Replicate the worksheet in a file named MyTiles.xls.
- (b) Solve algebraically:
 - (i) If a pile has a total of 1010 tiles, how many tiles are there in each row?
 - (ii) If a pile has 1500 white tiles, how many grey tiles are there in the pile?

[50]

QUESTION 2

Design an Excel workbook named MyInflation.xls to solve/illustrate the context numerically and graphically.

- (a) After how many years will the price of an item double at an annual inflation rate of 5%, assuming the rate remains constant?
Show that the answer does not depend on the current price of the item. Explain *why* not.
- (b) The current South African population* is estimated at 46 888 200 and the annual growth rate at 0,92%. Predict in what year the South African population will exceed 100 million. What are your assumptions?

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* [Statistics South Africa: Mid-year population estimates, South Africa, 2005, p 13](#)