

# Domino Stacks

You need: dominoes (optional)

ACTIVITY

1. Barbara and Kahu are building domino-stack houses like this:



1 storey



2 storeys



3 storeys

- How many dominoes will they need for the bottom storey of a 4-storey house?
  - Find a rule that shows the relationship between the number of storeys in a domino-stack house and the number of dominoes in its bottom storey.
  - How many dominoes would a stack of 20 storeys have in its bottom storey?
  - How many storeys high is a stack that has 69 dominoes in its bottom storey?
2. Barbara and Kahu make the following table to help predict how many dominoes they'll need to build domino houses.
- Complete their table.



Number of storeys	Number of dominoes
1	3
2	8
3	15
4	
5	
6	
7	
8	



- How many dominoes would Barbara and Kahu need altogether for a 10-storey domino house?
- Write a rule in words linking the number of storeys with the total number of dominoes.
  - Write the rule using symbols. Use  $n$  for the number of storeys.
- Barbara and Kahu must make a 76-storey domino house to break a world record.
  - How many dominoes do they need?
  - Suppose they can find only 4 899 dominoes. How many storeys can they build?