

Impossibilities.

- 1 This is impossible because $1+2+3+4+5+6+7+8+9+10 = 45$
the amount of money she has cannot be separated into 10 groups
of different amounts.
- 2^a This is impossible because $1+2+3+4+5+6+7+8+9+10 = 55$
When 55 is divided into 2 equal amounts it is not a whole number
therefore the towers cannot be equal heights.
- 2^b The sequence goes along the triangle numbers for the total
edgelenyth and it only works if n is even. Which is pattern
number 3478. It works for pattern numbers of $4n$ and $4n-1$.
- 3 This is impossible because the first set of n consecutive numbers
equals 10 when added together. This keeps on going and adding
 4 each step along. The total value could be described as $4n+6$.

Aisling A. Moks.

St Mary's college Hull.