

Boxing Balls

You need: counters (optional)

ACTIVITY

Quinten has permission to hunt for lost golf balls at the Shrubbery Golf Course. He washes them and puts them in boxes to sell.

He finds that 12 is a good number of golf balls to put in a box because he can use three different-sized rectangular boxes:



1×12

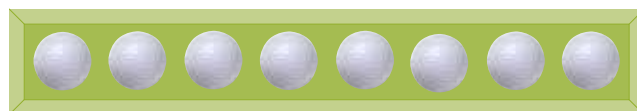


2×6



3×4

1. Other numbers of golf balls have fewer rectangular numbers. For example, 8 gives:



1×8



2×4

How many rectangular arrangements are possible with:

- 18 golf balls?
 - 20 golf balls?
 - 24 golf balls?
 - 17 golf balls?
2. a. Find numbers that have only one rectangular arrangement.
b. Explain why these numbers have only one arrangement.

