

Problem Solving: Act It Out and Use Reasoning

You can use counters, tables, ordered pairs, and graphs to act out a problem and show your reasoning.

Jenna is creating a display of photographs at her school for shark-awareness week. She has 24 photographs that she can display on 4 walls and 4 bulletin boards. She wants to put the same number of photographs on each wall and the same number of photographs on each bulletin board. How many different ways can Jenna display the photographs on the walls and bulletin boards?

Make a Table

Use walls and bulletin boards as the labels in the table.

Use counters to find the possible ways.

Walls	0	1	2	3	4	5	6
Bulletin Boards	6	5	4	3	2	1	0

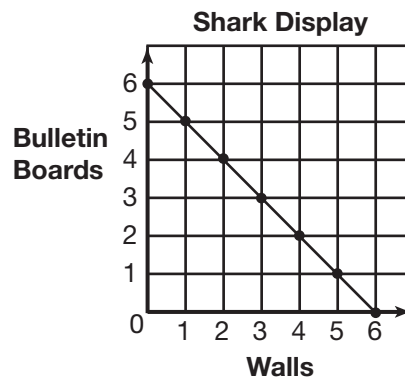
Write Ordered Pairs

(walls, bulletin boards)

(0, 6), (1, 5), (2, 4), (3, 3), (4, 2), (5, 1), (6, 0)

Make a Graph

You can use the table or ordered pairs to graph the different ways.



So, Jenna can display the shark photographs in 7 different ways on the walls and bulletin boards.

1. Cory is arranging 12 baseball caps on 2 shelves. He wants at least 2 caps on each shelf and the number of caps on each shelf to be even. How many possible ways can he arrange the caps on 2 shelves? Show your answer as ordered pairs.

2. Graph the solution for the above problem.

