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This is an example of a real world application lesson that appears in Level D of Milestone Maths. Every milestone ends with a real world application lesson like this one to prove to students that the maths they are learning is relevant to the world around them.

Milestone Maths is a home-grown print based maths curriculum written by an Australian homeschooler specifically for Australian homeschoolers. Our mission is to make maths simple for Australian homeschoolers.

If you like this lesson and would like to see if Milestone Maths would be a good fit for your family, visit our website at milestonemaths.com.au or scan the QR code below.

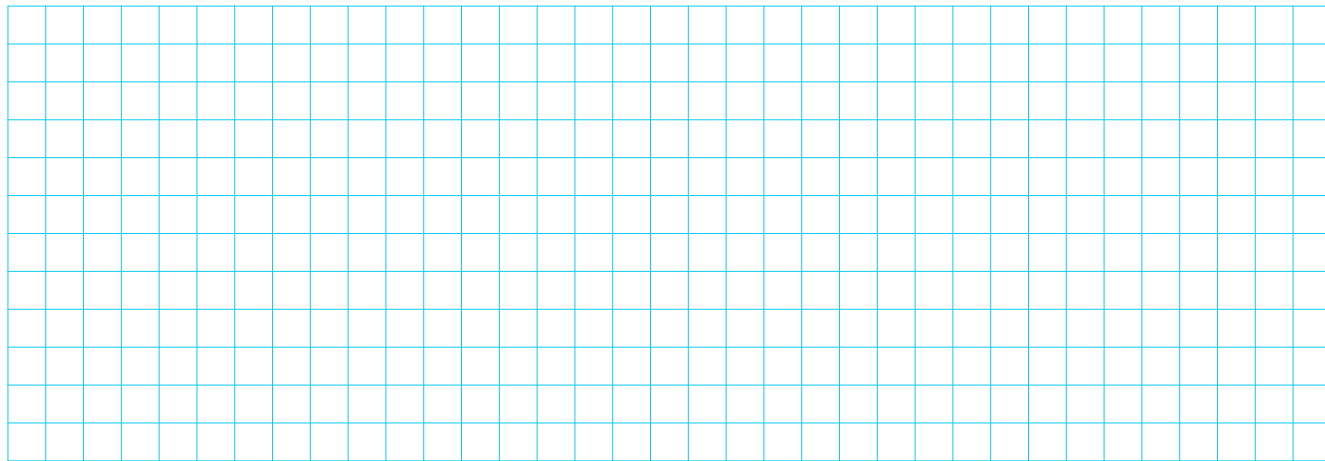


Lesson 5.10 Real World Application

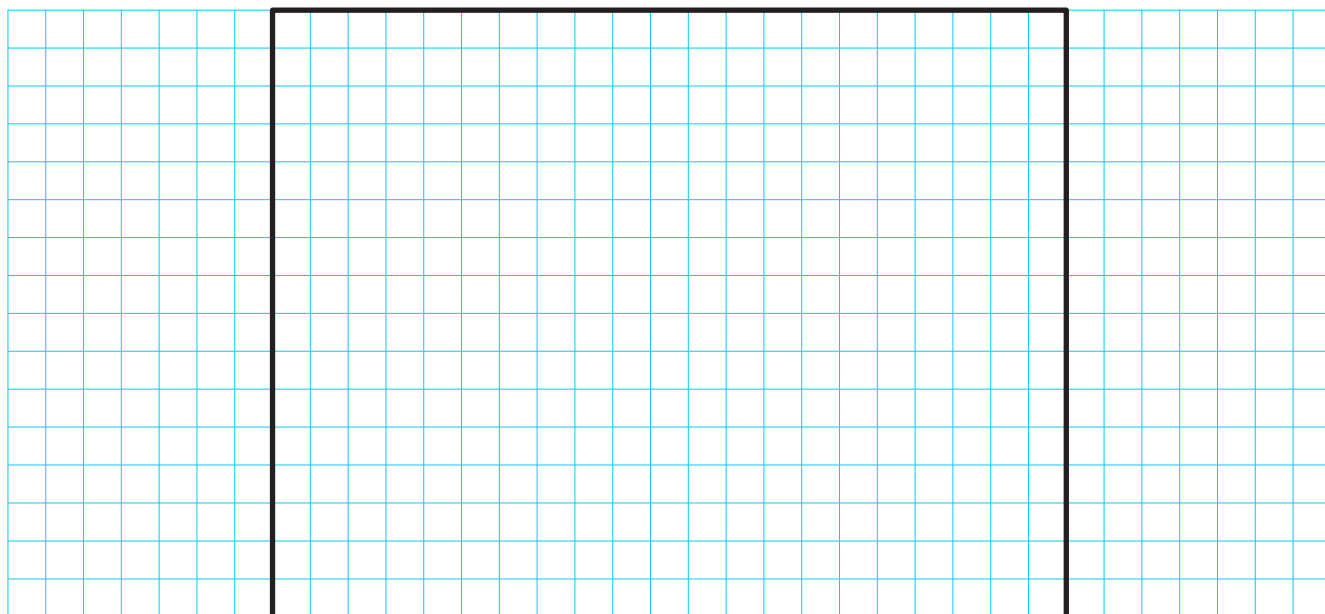
Packing Pencils

The Milestone Stationery Company is developing a new line of coloured pencils and you have been tasked to design the boxes the pencils will be packaged in. There will be 24 pencils in each box. How many different shaped arrays can you make with 24 objects?

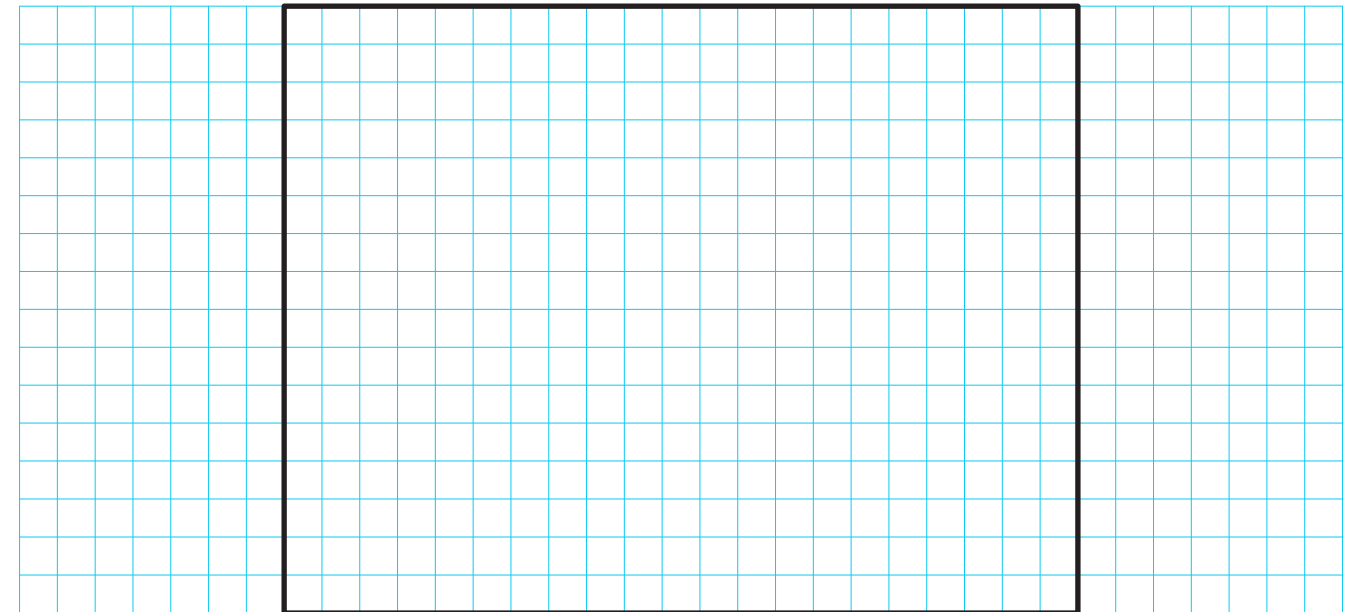
Grab the counters you used in lesson 5.3 and see how many ways you can arrange 24 of them in a neat rectangle. Draw your box shapes on the grid below (use one square to represent the space for one pencil.)



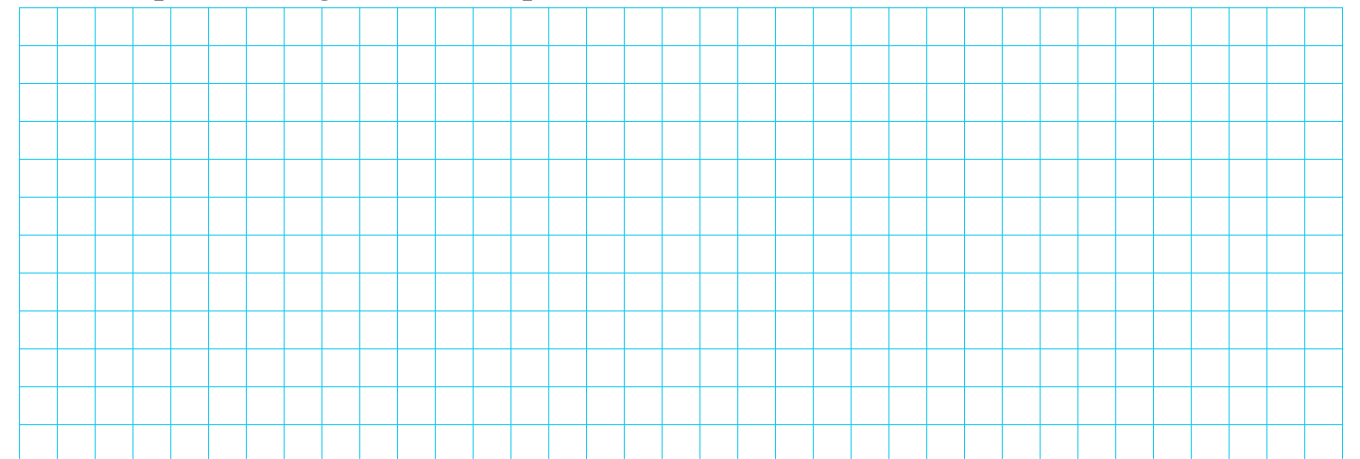
The stationery company is making two lines of pencils: a budget friendly kids pencil set and premium high-quality art pencil. Both sets need to be packed into cartons for distribution to the shops. There is only one size of carton available to the company that is this shape:



The company want to pack the kids pencils into the carton end up (so the pencils are standing up). Which pack size is the most appropriate for the carton in this case and how many packs will fit in the carton? Draw the arrangement here:



The premium pencils will come in a tin that the company wants to lay flat in the carton. Which pack size is the most appropriate for that case? (**Note** the pencils are 21 squares long). Draw the pack size here:



Challenge: Can you work out how many premium packs will fit in the carton? There is enough information in this lesson to work it out but it's a bit tricky to find!



