 Building a dog kennel

The problem

This is Annie. She has outgrown her kennel and needs a new one.



She is 60cm high, 80 cm long and 30 cm wide.

Your task

1. Use drawing software (or just by hand) design and draw a dog kennel for her. Your diagram should show all important measurements. Make sure you leave enough room for her to lie down and move around. Include a copy of your design in your report.
2. Calculate how much timber you will need for the project (in m2)
3. Calculate the volume of your dog kennel (in m3)
4. Use the Internet or visit a local store to research paint prices and coverage ( ie what area you could paint with 1L)
5. Use your research above to calculate how much paint you will need to paint the exterior surfaces of your dog kennel, and how much it will cost to paint.

Outcomes

* MA5.1-1WM uses appropriate terminology, diagrams and symbols in mathematical contexts
* MA5.1-2WM selects and uses appropriate strategies to solve problems
* MA5.1-3WM provides reasoning to support conclusions that are appropriate to the context
* MA5.2-1WM selects appropriate notations and conventions to communicate mathematical ideas and solutions
* MA5.2-2WM interprets mathematical or real-life situations, systematically applying appropriate strategies to solve problems
* MA5.1-8MG calculates the areas of composite shapes, and the surface areas of rectangular and triangular prisms
* MA5.2-11MG calculates the surface areas of right prisms, cylinders and related composite solids
* MA5.2-12MG applies formulas to calculate the volumes of composite solids composed of right prisms and cylinders

All outcomes referred to in this unit come from [Mathematics K-10 Syllabus](https://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/learning-areas/mathematics/mathematics-k-10) © NSW Education Standards Authority (NESA) for and on behalf of the Crown in right of the State of New South Wales, 2012