**Readiness Tasks**

**Outcome 8SS4**

Develop and apply formulas for determining the volume of right prisms and right cylinders.

**Readiness Goal:** Develop and apply a formula for determining the area of rectangles and the volume of right rectangular prisms (6SS3)

1. Write a formula for area that will work for any rectangle, including squares. Explain how it works.
2. Use a formula to calculate the volume of the figure shown. Show your work.

 

1. Find the area of each rectangle. What do you notice?



How is the formula for the area of these two shapes the same? How is it different?

 

1. Jacob has 36m of fencing to go around his dog’s play area. Sketch all the possible rectangle-shaped pens he could build. Find the area of each choice. Which pen will give his dog the most room?

	* 1.
2. A rectangular prism has a volume of 600 cm3. It has a base that has a length of 10 cm and a width of 4 cm. What is the height of the rectangular prism? How do you know? Show your thinking.
3. Stephen wants to carpet the floor in the playroom. Carpet is sold by the m2. How much carpet will he need?

 

**Readiness Goal:** Demonstrate an understanding of volume (5SS3)

1. What is the volume of the object below?



	1. 10 cm³
	2. 15 cm³
	3. 22 cm³
	4. 30 cm³

1. Use linking cubes to build as many rectangular prisms as you can that have a volume of 36 cubic units.
2. Jason’s family is building a new pool that is 5 m long and has a volume of 30 m3. What are the dimensions of the pool?



Using the same volume and length, design a pool that would have a different width and depth.

1. Tim’s pencil case is 9 cm long, 4 cm high and 5 cm wide. Laurie’s pencil case is 10 cm long, 6 cm high and 3 cm wide. Who’s pencil case has a greater volume? Explain your thinking.
2. Looking at a Kleenex box, explain your strategy for estimating the volume. Using cubes, calculate the most accurate volume of the Kleenex box. How reasonable was your estimate.