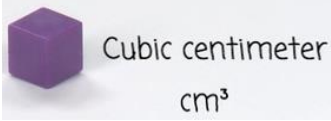
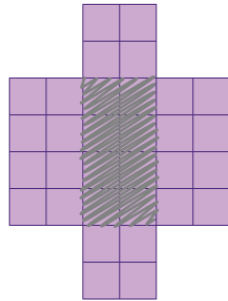


5th Grade Mission 5 notes



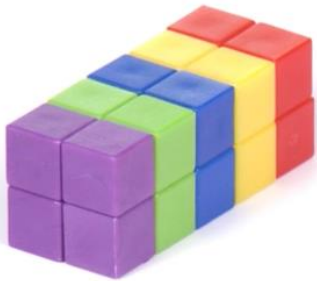
Volume: the amount of space an object takes up.



There will be 2 layers of 8 cubes.

$$2 \times 8 = 16 \text{ total cubes}$$

Cubes in Each Layer	Number of Layers	Volume
4	5	20 cm ³

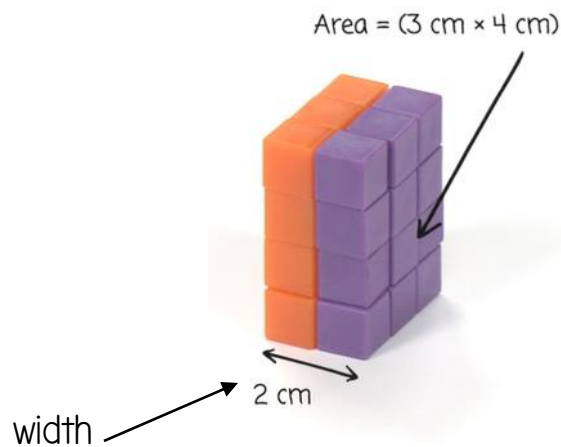


$$4 \text{ cm}^3 + 4 \text{ cm}^3 + 4 \text{ cm}^3 + 4 \text{ cm}^3 + 4 \text{ cm}^3 = 20 \text{ cm}^3$$

$$4 \text{ cubic cm} \times 5 = 20 \text{ cubic cm}$$

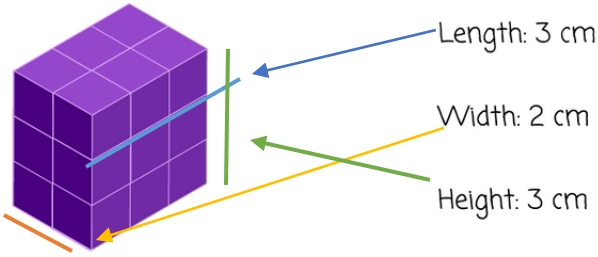
Area \times width = volume

Cubes in each layer	Number of layers	Volume
(3×2)	4	24 cm ³
(4×2)	3	24 cm ³
(3×4)	2	24 cm ³



$$(3 \text{ cm} \times 4 \text{ cm}) \times 2 \text{ cm} = \underline{\hspace{2cm}}$$

$$12 \text{ cm}^2 \times 2 \text{ cm} = 24 \text{ cm}^3$$



length- how long an object is

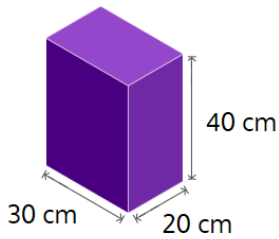
width- how wide an object is

height- how tall an object is

$$3 \text{ cm} \times 2 \text{ cm} \times 3 \text{ cm} = \underline{18 \text{ cm}^3}$$

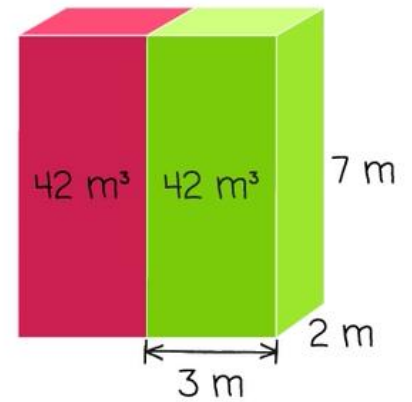
Volume = length x width x height

$$1 \text{ cm}^3 = 1 \text{ mL}$$



$$\text{Volume} = 24,000 \text{ cm}^3$$

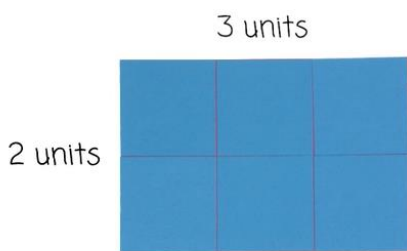
24000 mL of water are in the tank when it is full.



$$42 \text{ m}^3 + 42 \text{ m}^3 = 84 \text{ m}^3$$

Add the volumes of the two prisms to find the volume of the larger prism.

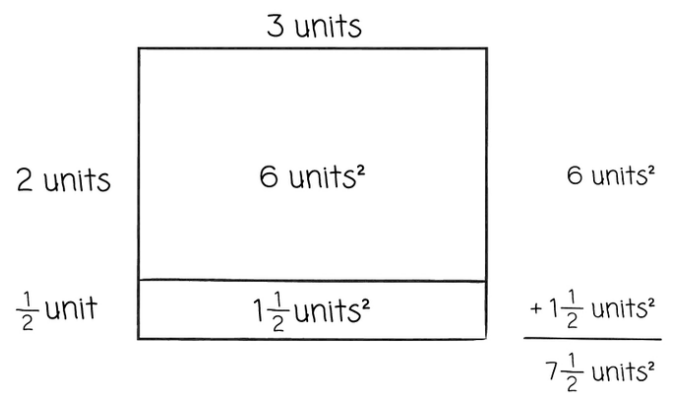
Area = length x width (units squared)

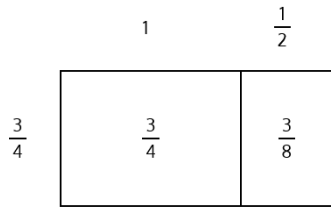


Rectangle A

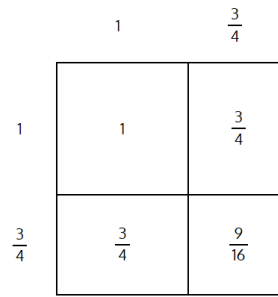
Rectangle	Length	Width	Area
A	3 units	2 units	6 units ²

units²



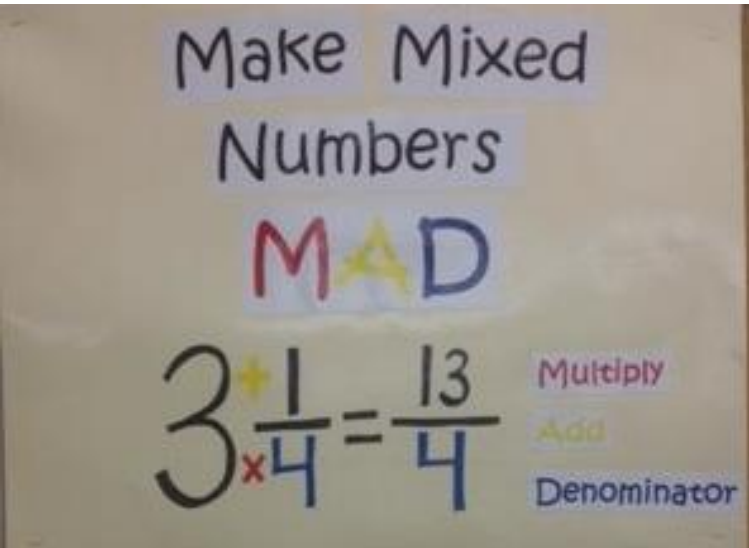


$$\frac{3}{4} \text{ units}^2 + \frac{3}{8} \text{ units}^2 = 1 \frac{1}{8} \text{ units}^2$$



$$1 \text{ in}^2 + \frac{3}{4} \text{ in}^2 + \frac{3}{4} \text{ in}^2 + \frac{9}{16} \text{ in}^2 = 3 \frac{1}{16} \text{ in}^2$$

find a common denominator and convert fractions



$$3 \frac{3}{4} \text{ in} = \frac{15}{4} \text{ in}$$

Strategies to find the Area

Distributive Property

	3 in	$\frac{3}{4}$ in
1 in	3 in^2	$\frac{3}{4} \text{ in}^2$
$\frac{1}{3}$ in	1 in^2	$\frac{1}{4} \text{ in}^2$

$$3 \frac{3}{4} \times 1 \frac{1}{3}$$

$$= (3 \times 1) + (\frac{3}{4} \times 1) + (3 \times \frac{1}{3}) + (\frac{3}{4} \times \frac{1}{3})$$

$$= 3 + \frac{3}{4} + 1 + \frac{1}{4}$$

$$= 5 \text{ in}^2$$

Multiply Fractions Greater Than 1

	$\frac{15}{4}$ in
$\frac{4}{3}$ in	5 in^2

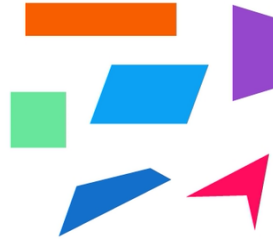
$$\frac{4}{3} \times \frac{15}{4}$$

$$= \frac{1 \cancel{4} \times 15}{3 \times \cancel{4} 1}$$

$$= 5 \text{ in}^2$$

Perimeter = length + width + length + width OR $(2 \times \text{length}) + (2 \times \text{width})$

Quadrilateral- polygon that has 4 straight sides



Not all quadrilaterals are trapezoids, but all trapezoids are quadrilaterals.

Not all trapezoids are parallelograms, but all parallelograms are trapezoids.

Not all parallelograms are rhombuses, but all rhombuses are parallelograms.

Not all parallelograms are rectangles, but all rectangles are parallelograms.

Shape	Sides	Attributes	Category	Picture
Trapezoid	4 straight	At least 1 pair of parallel sides	Quadrilaterals	
Parallelogram	4 straight	2 pairs of parallel sides	Quadrilaterals Trapezoids	
Rhombus	4 Straight	4 equal sides 2 pairs of parallel sides	Quadrilaterals Parallelograms Trapezoids	
Rectangle	4 Straight	4 right angles 2 sets of parallel sides Opposite sides are equal	Quadrilaterals Parallelograms Trapezoids	
Square	4 straight	4 equal sides 4 right angles	Quadrilaterals Parallelograms Trapezoids Rhombus Rectangles	