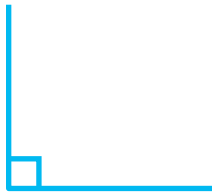


# Acute Angle, Right Angle and Obtuse Angle

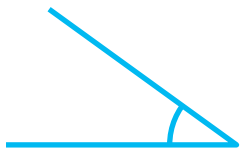
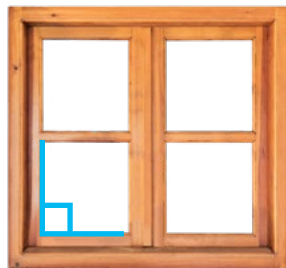
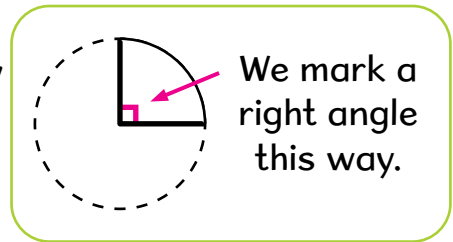
## Let's Learn



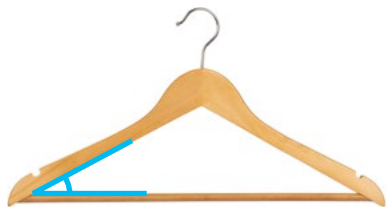
right angle



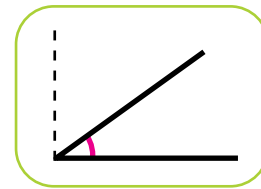
This is a **right angle**.  
It is an angle formed by  
a quarter turn.



acute angle



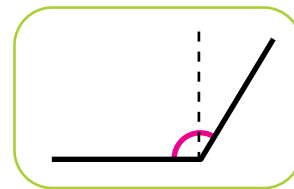
This angle is smaller than  
a right angle.  
It is an **acute angle**.



obtuse angle



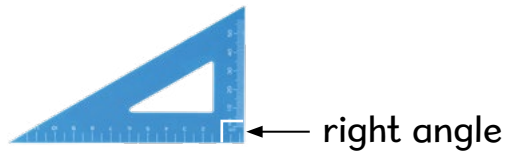
This angle is greater than  
a right angle.  
It is an **obtuse angle**.



## Maths Talk



This is a **set square**.  
It has a right angle.



What angles are formed by the laptop display and the keyboard?  
What do you think the set square is used for in each picture?  
Share your thoughts.

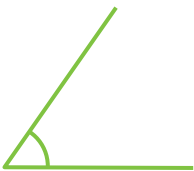


## Let's Practise



Identify whether the angle is a right angle, an acute angle or an obtuse angle.

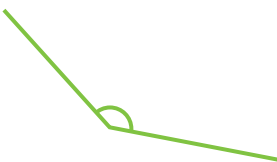
(a)



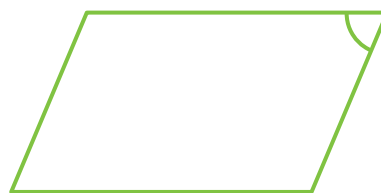
(b)



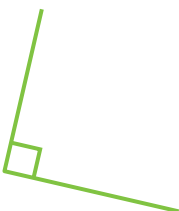
(c)



(d)



(e)



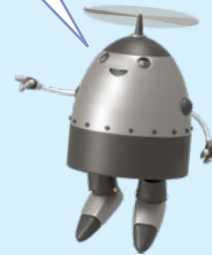
(f)



The picture shows a skateboarder having fun moving up and down the slope.

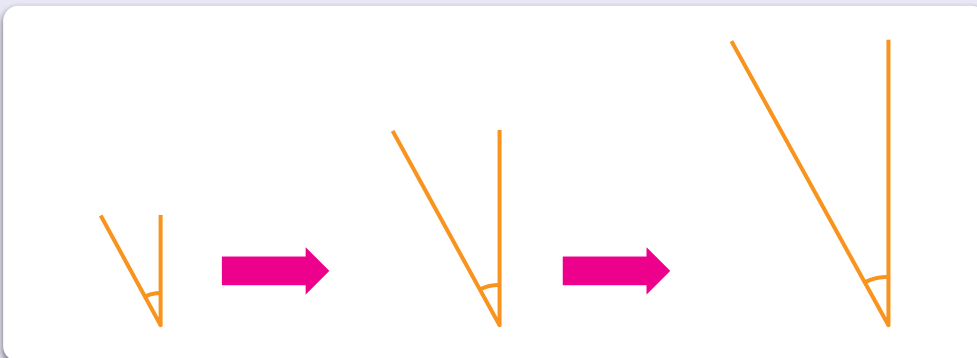


How does the angle of the slope affect the speed of the skateboarder going down the slope?



## Thinking Aloud

Anna draws a figure as shown below.  
She then extends the straight lines of the figure drawn.  
Next, she extends the straight lines even more.

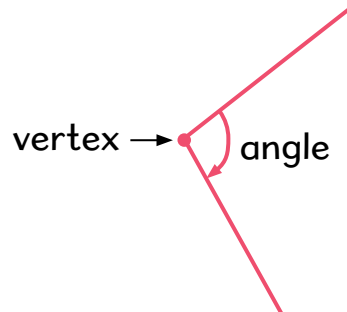
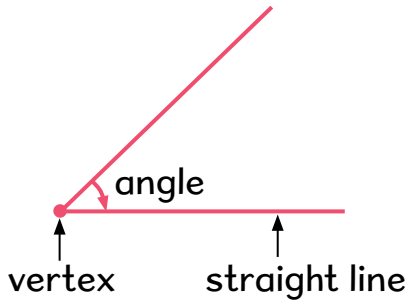


Anna thinks that as the figure gets bigger, the marked angle also becomes bigger.  
What do you think?

# What Have I Learnt?



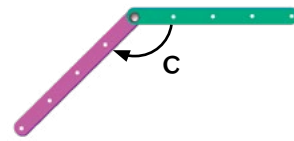
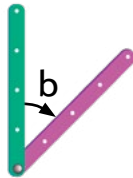
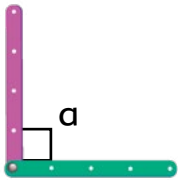
- 1 Angles are formed when two straight lines meet at a point.



Where do you think the other angle is?

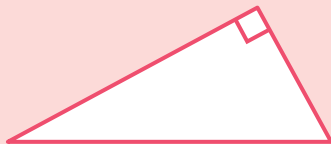


- 2 The size of an angle depends on the amount of turning.

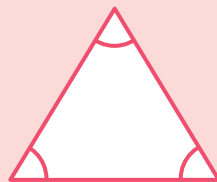


- 3 These are examples of different types of angles.

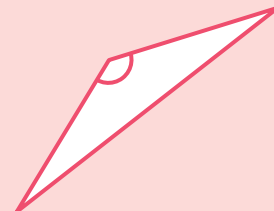
right angles



acute angles



obtuse angles



# Measuring and Converting Volume in Litres and Millilitres

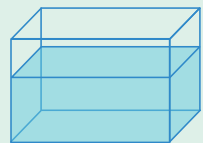


## Recall

**Volume** is a measure of the amount of liquid in a container. It is the amount of space taken up by the liquid.

The **litre (ℓ)** is a unit of volume.

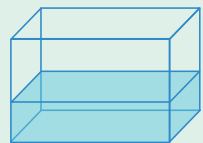
What is the volume of water in each container?



Container A



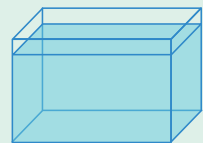
ℓ



Container B



ℓ



Container C



ℓ

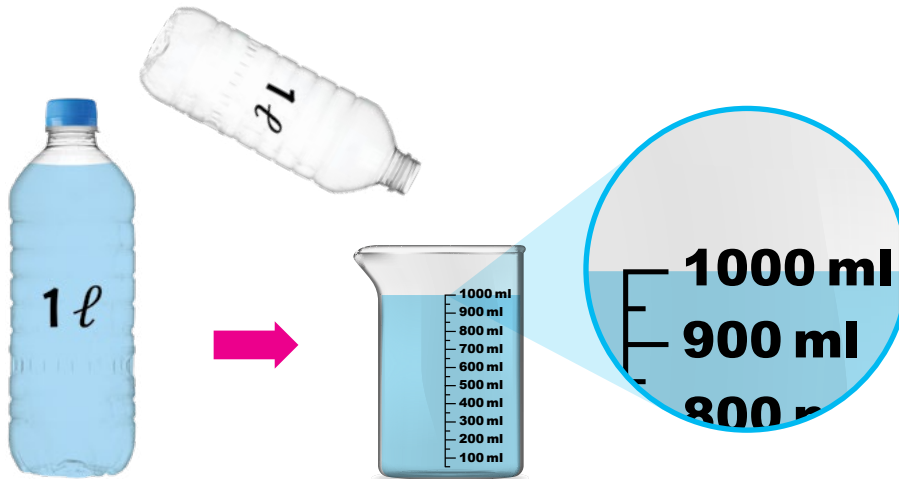
- (a) Container  contains the greatest volume of water.
- (b) Container  contains the smallest volume of water.
- (c) The volume of water in Container A is  ℓ greater than that in Container B.
- (d) The volume of water in Container B is  ℓ less than that in Container C.



## Let's Learn



- 1 The **capacity** of a container is the volume of the container when completely filled.  
The capacity of this bottle is about 1 *ℓ*.



1 litre of water in the beaker is the same as 1000 millilitres.



1 litre = 1000 **millilitres** or 1000 **ml**.

The **millilitre** is a smaller unit of volume.  
We can measure volume in litres and millilitres.

- 2 (a) Look at this double-measuring spoon.  
It is used to measure a small amount of medicine.



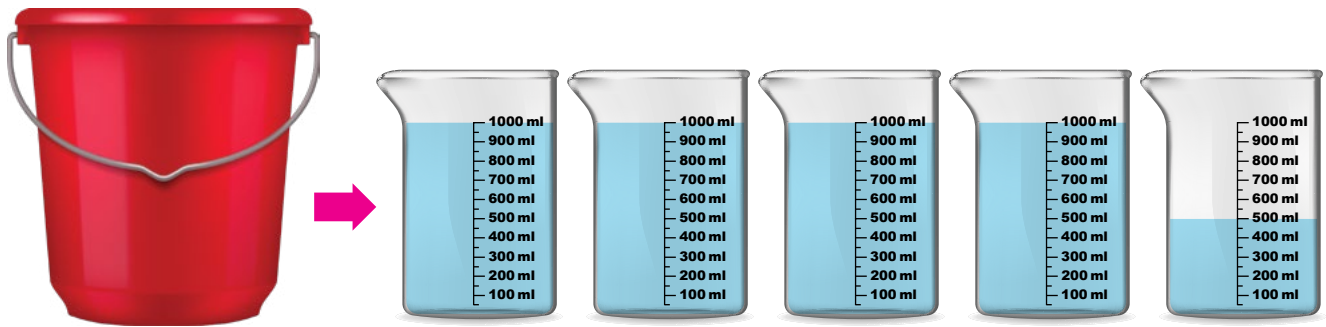
The big spoon measures 10 ml of liquid.  
The small spoon measures 5 ml of liquid.

- (b) This is a syringe.



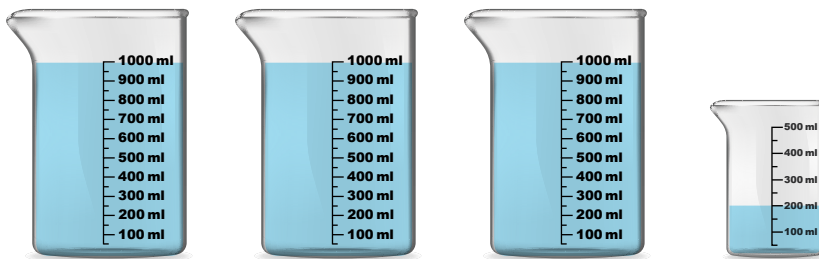
It can be used to measure 1 ml of liquid.  
Can you see how much 1 ml is?

3 How much water is there in the pail?



The volume of water in the pail is **4 ℓ 500 ml**.

4 The total volume of water in the beakers is 3200 ml.



1000 ml = 1 ℓ  
3000 ml = 3 ℓ

$$\begin{aligned} 3200 \text{ ml} &= 3000 \text{ ml} + 200 \text{ ml} \\ &= 3 \ell + 200 \text{ ml} \\ &= 3 \ell 200 \text{ ml} \end{aligned}$$

The total volume of water in the beakers is **3 ℓ 200 ml**.

5 The capacity of a small bathtub is 9 ℓ 655 ml.

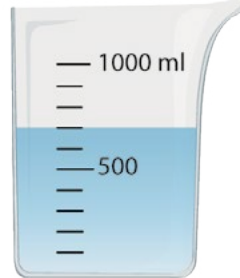
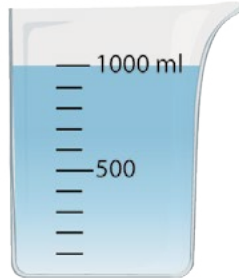
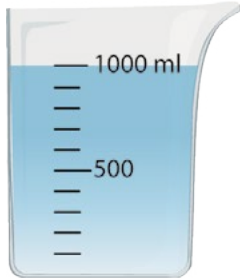


1 ℓ = 1000 ml  
9 ℓ = 9000 ml

$$\begin{aligned} 9 \ell 655 \text{ ml} &= 9 \ell + 655 \text{ ml} \\ &= 9000 \text{ ml} + 655 \text{ ml} \\ &= 9655 \text{ ml} \end{aligned}$$

The capacity of a small bathtub is **9655 ml**.

## Maths Talk



Discuss with your partner.

- How much water is there altogether?
- How much water is needed to fill up the containers to get 3000 ml of water altogether?

## Hands-on Activity



Work in groups.

Each group will be given two containers of different sizes.  
Find the capacity of each container.

- Step 1** Fill one container with water.
- Step 2** Estimate the capacity of the container and record it.
- Step 3** Pour the water into a measuring jug or beaker.
- Step 4** Record the capacity of the container.

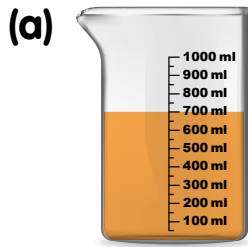
Repeat **Step 1** to **Step 4** for the other container.

	Container A	Container B
Estimate		
Measure		

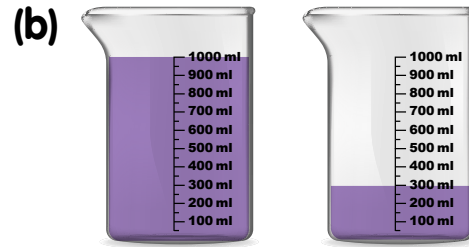
# Let's Practise



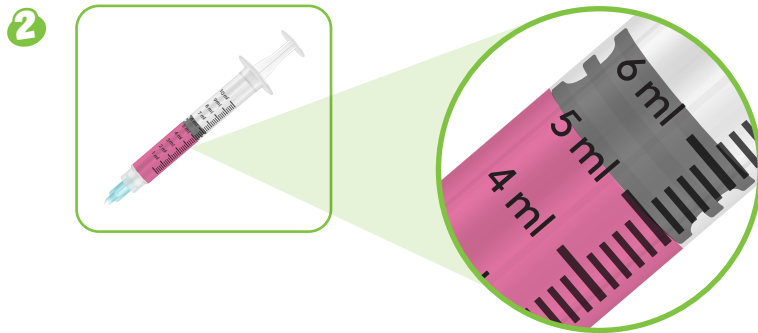
1 Find the volume of coloured water shown.



ml



ℓ  ml



The volume of medicine syrup in the syringe is  ml.

3 The total volume of milk is 4750 ml.



The total volume of milk is  ℓ  ml.

4 What is the volume in millilitres?

(a) 4 ℓ 260 ml =  ml

(b) 7 ℓ 9 ml =  ml

5 What is the volume in litres and millilitres?

(a) 5789 ml =  ℓ  ml

(b) 3051 ml =  ℓ  ml

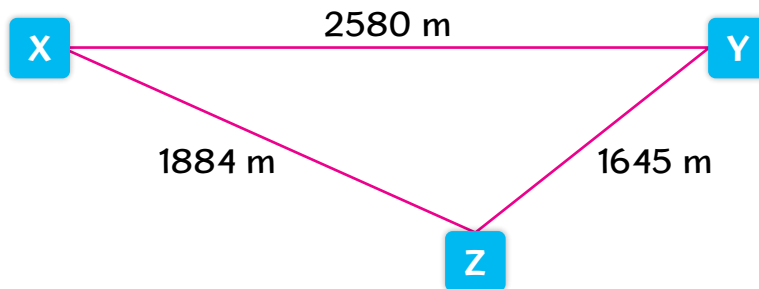


# Word Problems

## Let's Learn



- 1 Mr Razak travels from Point X to Point Y, then to Point Z.  
Mr Lee travels from Point X to Point Z directly.
- (a) What is the distance Mr Razak travels to get from Point X to Point Z?
- (b) How much farther does Mr Razak travel than Mr Lee?



(a)  $2580 + 1645 = 4225$

Mr Razak travels **4225 m** to get from Point X to Point Z.

(b)  $4225 - 1884 = 2341$

Mr Razak travels **2341 m** farther than Mr Lee.

- 2 A tailor uses 348 cm of cloth to make a shirt.  
He uses 125 cm more cloth to make a blouse than a shirt.  
How much cloth does he use in total for the shirt and the blouse?

$$348 + 125 = 473$$

He uses **473 cm** of cloth to make a blouse.

$$348 + 473 = 821$$

He uses **821 cm** of cloth to make the shirt and the blouse altogether.

- 3 The mass of one water bottle is 575 g.  
What is the mass of 4 identical water bottles?

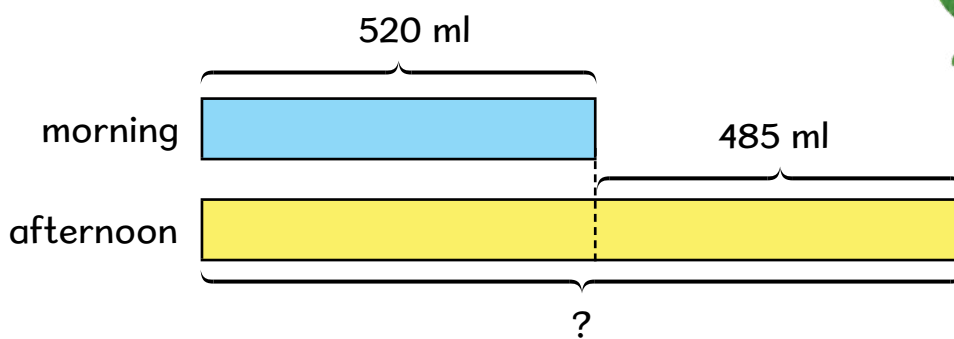


$$575 \times 4 = 2300$$

$$\begin{aligned} 2300 \text{ g} &= 2000 \text{ g} + 300 \text{ g} \\ &= 2 \text{ kg } 300 \text{ g} \end{aligned}$$

The mass of 4 water bottles is **2 kg 300 g**.

- 4 Susan made 520 ml of lemonade in the morning.  
She made 485 ml more lemonade in the afternoon  
than in the morning.  
How much lemonade did she make in the afternoon?  
Give your answer in litres and millilitres.



$$520 + 485 = 1005$$

$$\begin{aligned} 1005 \text{ ml} &= 1000 \text{ ml} + 5 \text{ ml} \\ &= 1 \text{ l } 5 \text{ ml} \end{aligned}$$

She made **1 l 5 ml** of lemonade in the afternoon.

- 5 Siti has 835 ml of fruit juice to make jelly.  
She pours 90 ml of fruit juice into each jelly cup.  
She uses 9 jelly cups.  
How many millilitres of fruit juice does Siti have left?

$$90 \times 9 = 810$$

Siti uses 810 ml of fruit juice.

$$835 - 810 = 25$$

Siti has **25 ml** of fruit juice left.

- 6 The capacity of a tank is 32 ℓ.  
8 full pails of water are needed to fill the tank completely.  
Each pail has the same capacity.  
How many full pails of water are needed to fill a container of capacity 40 ℓ?

$$32 \div 8 = 4$$

The capacity of each pail is 4 ℓ.

$$40 \div 4 = 10$$

**10** full pails of water are needed to fill a container of capacity 40 ℓ.

## Let's Practise



- 1 The distance between Town W and Town Y is 48 km.  
The distance between Town Y and Town Z is 3 times as long as the distance between Town W and Town Y.  
What is the distance between Town Y and Town Z?

$$\square \times \square = \square$$



The distance between Town Y and Town Z is  $\square$  km.

- 2 A ribbon 570 cm long is cut into 3 equal pieces.  
What is the length of each piece of ribbon?

$$\square \div \square = \square$$

The length of each piece of ribbon is  $\square$  cm.

- 3 Mr Samad ran 5 rounds around a 400-m track. He then walked for another 250 m. How far did Mr Samad run and walk altogether?  
Express your answer in kilometres and metres.

$$\square \circ \square = \square$$

$$\square \circ \square = \square$$

$$\square \text{ m} = \square \text{ km } \square \text{ m}$$

Mr Samad ran and walked for  $\square$  km  $\square$  m.

- 4 The total mass of some files and books is 2700 g.  
When all the files are removed, the weighing scale reads 2100 g.  
(a) What is the mass of all the files?  
(b) How much heavier are the books than the files?

(a)  $\square \circ \square = \square$

The mass of all the files is  $\square$  g.

(b)  $\square \circ \square = \square$

The books are  $\square$  g heavier than the files.

- 5 Mr Ramesh weighs 60 kg. He is 4 times as heavy as his son, Dinesh. What is their total mass?
- 6 Mrs Zhang poured 950 ml of orange juice from a container into some cups. There were 3750 ml of orange juice left in the container. What was the amount of orange juice in the container at first? Express your answer in litres and millilitres.
- 7 Mrs Lee prepared 12 ℓ of apple juice. She prepared 4 times as much apple juice as orange juice. How many more litres of apple juice than orange juice did she prepare?
- 8 5 identical cups of water can fill a flask. 2 of these flasks can fill a container. What is the capacity of one cup if the container has a capacity of 840 ml?

## Mathematics AROUND US

- 1 We can see volume being used in our daily lives.

I use measuring cups and spoons to measure the proportion of ingredients needed to bake a cake.



baking

The amount of liquid detergent I use for washing clothes depends on the size of the load.



washing clothes

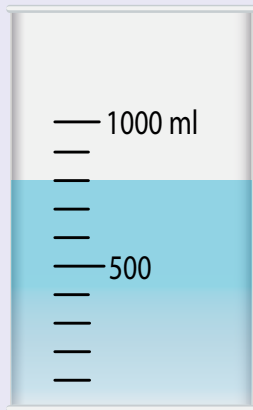
Can you think of more examples of how volume is used?





## Thinking Aloud

- 1 Container A has 800 ml of water.  
Container B has 600 ml of water.  
How much water should Peter pour from Container A into Container B so that both containers have an equal amount of water?



A



B

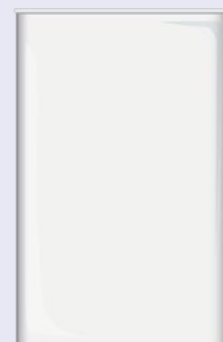
- 2 Ravi has a 300-ml jug, a 500-ml beaker and an empty container.  
What can he do to measure 400 ml of water using these containers?



A



B



C