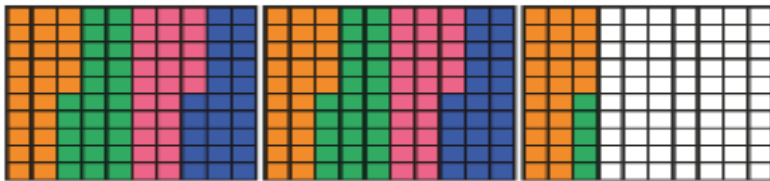
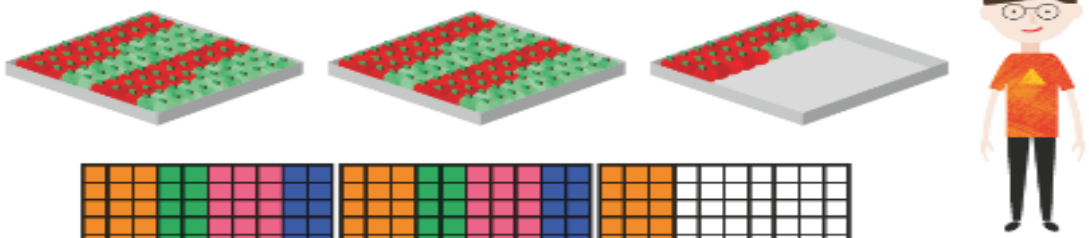


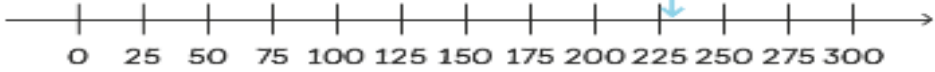
# The CPA approach

Count in 25s.

25, 50, 75, 100, 125, 150, 175, ...



230



0 25 50 75 100 125 150 175 200 225 250 275 300

Show 230 using number discs.

Method 1

100 100 10 10 10

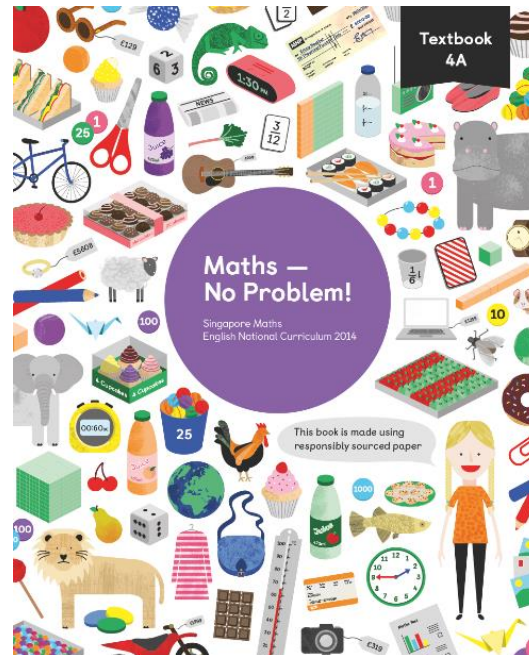
Method 2

25 25 25 25  
25 25 25 25  
25 1 1 1 1 1

# So how did this approach help in Singapore with Maths?

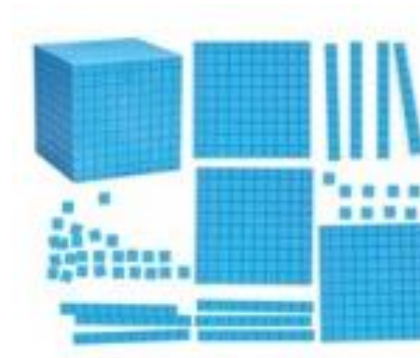
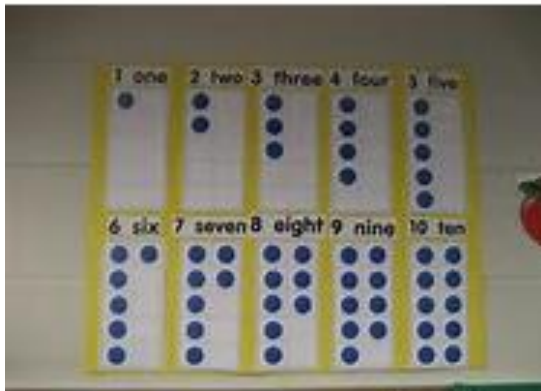
Since they adopted this approach the Trends in International Mathematics and Science Study has consistently ranked Singapore among the best mathematics results in the world.

Maths no problem was created by Dr. Yeap Ban Har to support schools across the world achieve these great results.



# What happens during lessons?

Support is provided through use of equipment and visual references.



# What about challenge?

Challenge is provided through mastery techniques - presenting information in a different way and questioning.

**In Focus**



Can these numbers be used to make a number pattern?  
Describe the rule used to make the number pattern.

# Structure of a Singapore Maths Lesson

## Comparing Quantities

Lesson  
4

In Focus



The shorter piece is  $\frac{3}{5}$  the length of the longer piece.



The ratio of the lengths is 3 : 5.



This approach focuses on the use of equipment and discussion.

# Structure of a Singapore Maths Lesson

## Let's Learn

1



Is this  $\frac{3}{5}$  the length of the other?

$$\begin{aligned}\text{Ratio} &= 6 \text{ cm} : 10 \text{ cm} \\ &= 3 : 5\end{aligned}$$

3 to 5

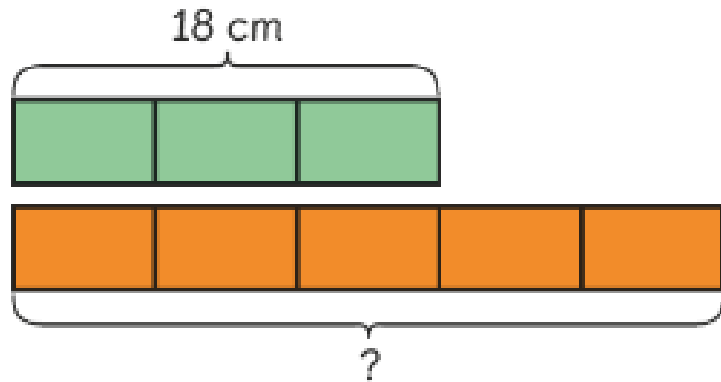
It means for every 3 cm of the green piece, there are 5 cm of the orange piece.

Discussion of the methods which provide a bank of strategies for your child to use throughout their school career.

# Structure of a Singapore Maths Lesson

The ratio of the length of a shorter strip of paper to the length of a longer strip of paper is 3 : 5.

(a) If the shorter strip is 18 cm, how long is the longer strip?



$$18 \div 3 = 6 \text{ cm}$$

$$5 \times 6 = 30 \text{ cm}$$

The longer strip is 30 cm.

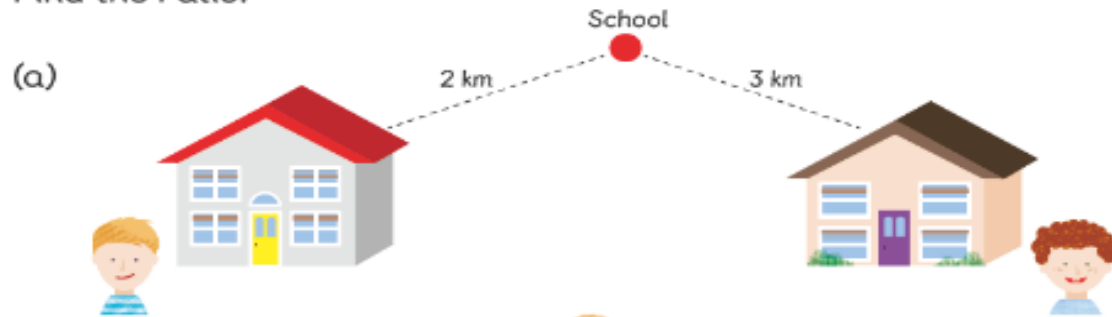
Bar method :

<http://teacher.mathsnoproblem.co.uk/academy/video-library/basics-explained/parent-7-bar-models-1of2/>

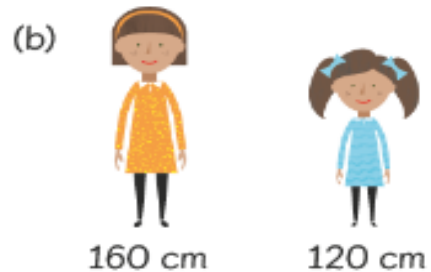
# Structure of a Singapore Maths Lesson

## Guided Practice

1 Find the ratio.



The ratio of the distance of 's home from school to the distance of 's home from school is  : .



The ratio of 's height to 's height is  : .

*This area allows children to work as a team to solve the problems*

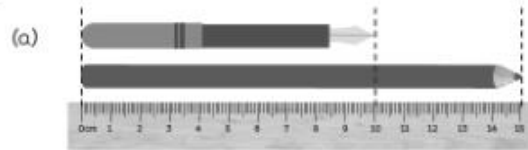


# Structure of a Singapore Maths Lesson

## Worksheet 4

### Comparing Quantities

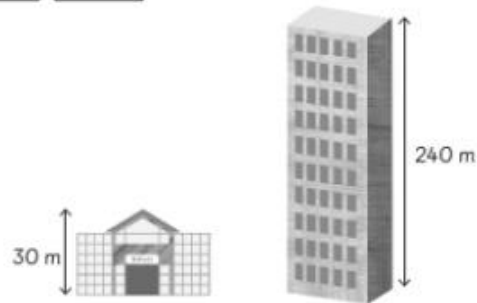
1 Fill in the blanks.



The length of the pen is  the length of the pencil.

The ratio of the length of the pen to the length of the pencil is  : .

(b)



The height of the building is  times the height of the school.

The ratio of the height of the building to the height of the school is  : .

2 A rope is cut into two parts so that the ratio of the length of the shorter piece to that of the longer piece is 3 : 4.



(a) If the original length of the rope is 14 cm, what is the length of the shorter piece?

(b) If the length of the longer piece is 36 cm, what is the length of the shorter piece?

(c) If the length of the shorter piece is 24 cm, what is the original length of the rope?

*Independent work allows your child to consolidate their learning.*