

Maths Workshop

Wednesday 11th November 2015



Mental Maths

- Dice Games
- Subitising

<http://www.slideshare.net/fullscreen/annetteblack6/subitising-1/4>

Working Mathematically

Ideas, questions and lines of enquiry

- develops the mathematics they use in a wide range of contexts
 - makes suggestions of ways to tackle a range of problems
 - makes connections to previous work
 - chooses equipment appropriate to the task independently
 - poses and answers questions related to a problem and suggests a range of possible approaches to the solution
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Working Mathematically

Represent and communicate

- represents problems pictorially, using a model or with concrete resources
 - restates the problem in another way
- presents work in a clear and organised way
 - *uses and interprets a wide range of mathematical symbols and diagrams*
- begins to work in an organised way from the start using strategies such as recording results in order and checks for accuracy
- discusses their mathematical work and uses mathematical language in a more precise and accurate way

Working Mathematically

Plan an approach and implement it

- uses facts and procedures to solve simple and more complex problems
- develops own strategies for solving problems and applying mathematics to practical contexts
- finds solutions that match the context of the problem

Computational complexity (Within the range of number facts known)

- solves problems with more than one step at least one of which is more complex

Working Mathematically

Make connections

- makes connections to previous work within mathematics and with other subjects
- poses and answer questions that will help make sense of the problem
- poses 'What if?' questions that may change the outcome or direction of the problem

Evaluate

- suggests refinements to elements of problem solving by comparing other approaches and against 'modelled' examples



Working Mathematically

Draw conclusions

- predicts conclusions and reason why when referring to work
- comments on whether the conclusion was expected
- makes valid inferences when referring to own work

Generalise

- finds solutions and makes predictions by identifying patterns when working
- forms generalised rules in words, using concrete resources or own representation

Working Mathematically

Justify

- justifies answers and solutions by referring to their work and support with examples

Problem solving strategies

- identifies irrelevant information; uses lists and tables to identify and organise information
- uses informed 'guess and check'
- seeks a pattern
- draws a diagram or model
- seeks an exception
- breaks the problem down into simpler steps
 - e.g. works backwards

Singapore Bar Method

<http://www.mathplayground.com/thinkingblocks.html>

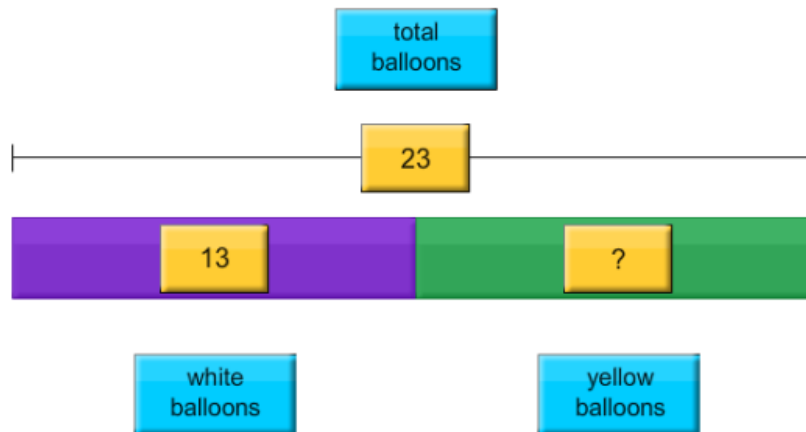
Can be used to solve addition, subtraction, multiplication, division, ratio, proportion and fractions, especially word problems

The background of the slide is a solid blue color. In the bottom right corner, there are several concentric white circles that resemble ripples on water, creating a decorative effect.

Addition/Subtraction

Word Problem: Lexi bought some balloons for the party. There were 23 yellow balloons and 13 white balloons. How many balloons did Lexi buy altogether?

Add numbers to your model. Use a ? to show the missing number.

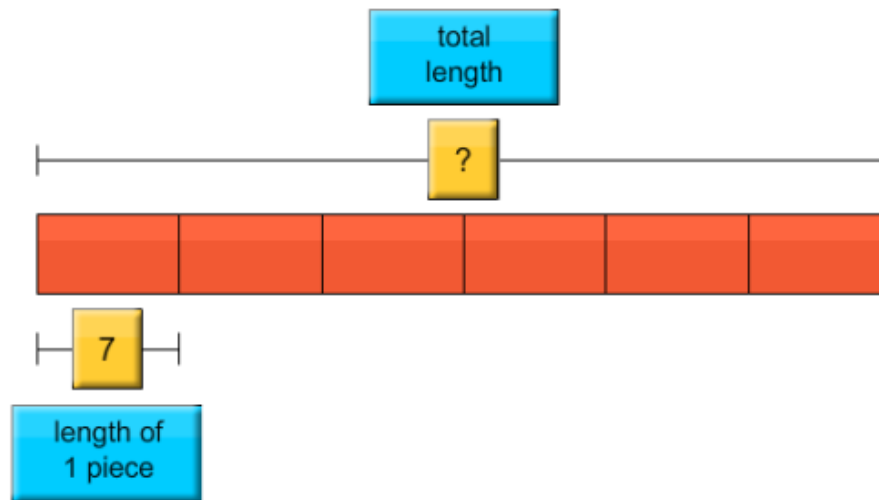


Check

Multiplication/Division

Word Problem: Taylor cut a length of rope into 6 pieces. Each piece measured 7 feet. What was the length of the rope before it was cut?

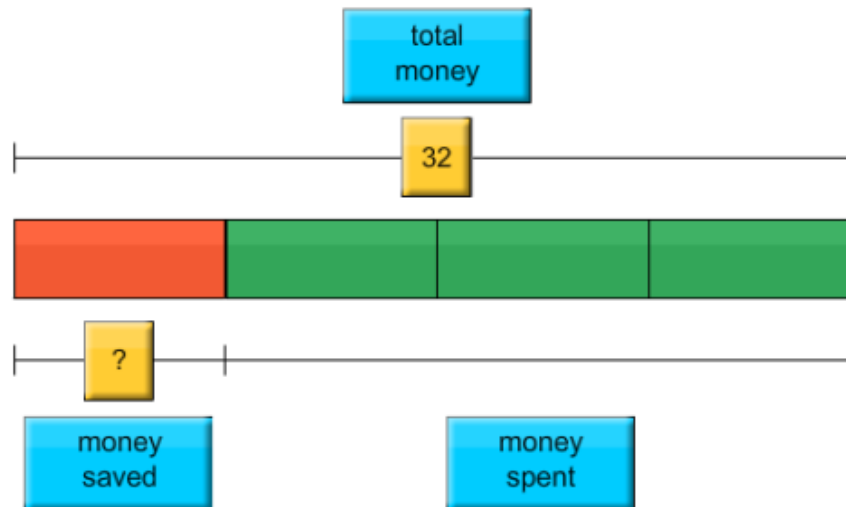
Add numbers to your model. Use a ? to show the missing value.



Fractions

Word Problem: Jada's car wash business made \$32 yesterday. She decided to save $\frac{1}{4}$ of her earnings and spend the rest on supplies. How much money did Jada save?

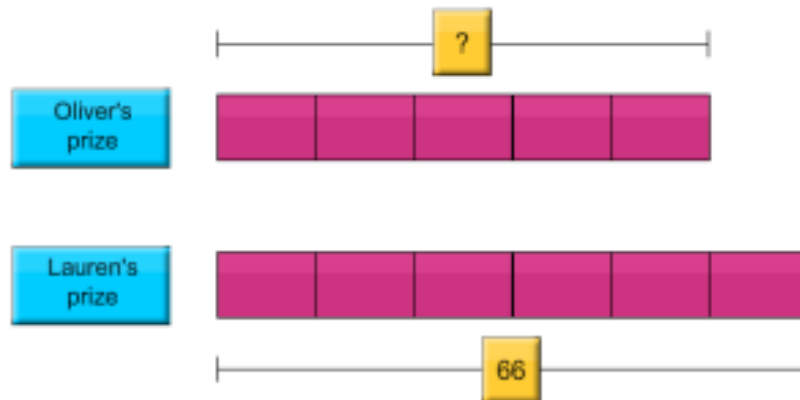
Add numbers to your model. Use a ? to show the missing number.



Ratio and proportion

Word Problem: Oliver and Lauren shared a cash prize in the ratio 5:6. If Lauren received \$66, how much money did Oliver receive?

Add numbers to your model. Use a ? to show the missing number.



Check

What you can do at home

- Play games with dice
- Get them to explain their homework to you, what they need to do
- Practise times tables – CD, chanting, practice
- Add up and subtract numbers
- Rising stars books