Mosman Public School

A practical approach to supporting your child with Mathematics outside of the classroom

Years K-2

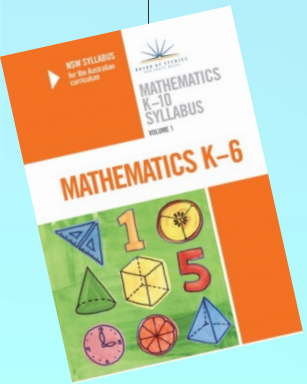
NUMERACY WORKSHOP

- Introduction
- You as the role model
- The learning Environment
- Opportunities for Mathematics
- Resources
- More games and activities

By the end of Early Stage 1 (Kindergarten)

Students:

- Ask questions and use known facts to explore mathematical problems and develop fluency with mathematical ideas.
- Use everyday language, concrete materials and informal recordings to demonstrate understanding and link mathematical ideas.
- Count to 30 and represent numbers to 20 with objects, pictures, numerals and words.
- Read and use ordinal numbers to at least 'tenth'.
- Use concrete materials to model addition, subtraction, multiplication and division.
- Use the language of money and recognise the coins and notes of the Australian monetary system.
- Divide objects into two equal parts and describe them as halves.
- Recognise, describe and continue repeating patterns of objects and drawings.



By the end of Stage 1 (Year 2)

Students:

- Ask questions and use known facts, objects, diagrams and technology to explore mathematical problems and develop mathematical fluency.
- Link mathematical ideas and use appropriate language and diagrams to explain strategies used.
- Count, order, read and write two- and three-digit numbers and use a range of strategies and recording methods.
- Use mental strategies and concrete materials to add, subtract, multiply and divide, and solve problems.
- Model and describe objects and collections divided into halves, quarters and eighths.
- Associate collections of Australian coins with their value.
- Use place value to partition numbers.
- Describe and continue a variety of number patterns and build number relationships.
- Relate addition and subtraction facts for sums to at least 20.

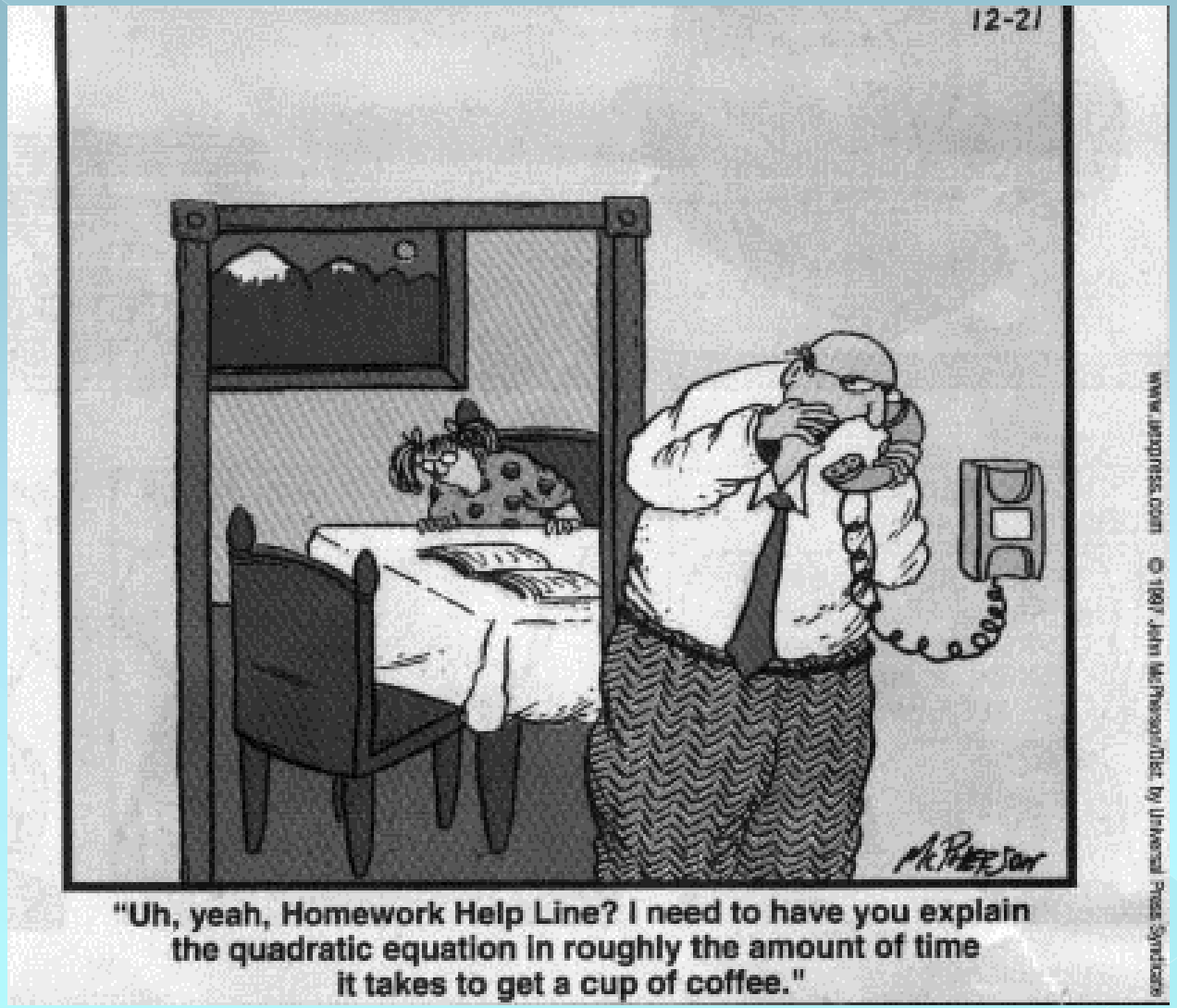
POLL

1. Are you a cat or dog person?

2. Early bird or night owl?

3. Maths or English?

Your lack of confidence



Being a role model

- Encourage persistence
- Avoid negative comments about math
- Praise EFFORT not intelligence "*I like how hard you are trying*"
- Expressive writing
- Problem-solve out loud
- Relate math to real-life
- Read books to your child that involve math
- Play games that involve logical thinking, strategizing, and reasoning
- Involve your child in daily activities that require the use of Math

"The hardest part of homework is keeping my parents motivated."

Encouraging problem solving

Ask higher order thinking questions:

- *How can you prove that?*
- *What would happen if…?*
- *Does that make sense?*
- *Can you show me another way?*
- *How does this relate to…?*
- *How accurate is this?*

CLOSED → 6+4= 10

OPEN → What numbers could you add together to make 10?

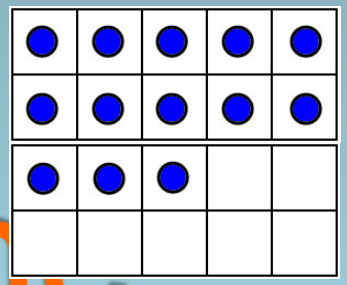
Encourage your child to solve problems a variety of ways:

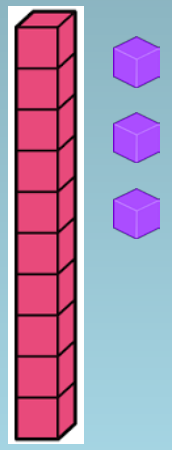
- *Guess and check*
- *Draw a picture*
- *Make a list*
- *Solve a similar problem*
- *Look for a pattern*
- *Work backwards*
- *Use manipulatives,*
- *Simulate the problem*

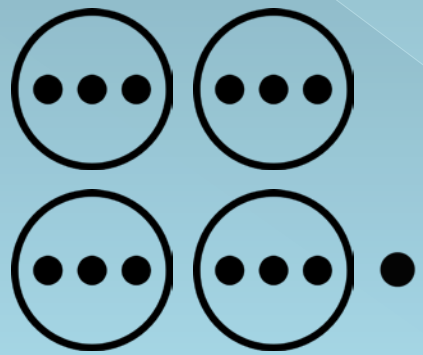
The answer is 13 what is the question?

How many questions can you think of?
How many ways can you represent 13?

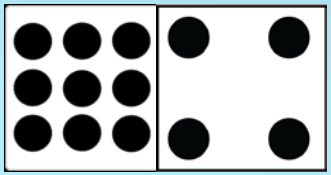
Susan had 4 bananas, 5 apples and 4 oranges. How many pieces of fruit altogether?

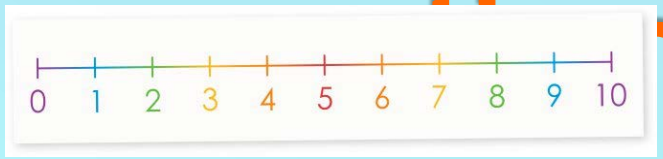






The answer is 13 what is the



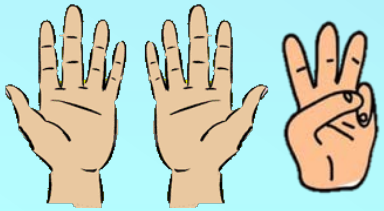


n?

10 + 3 = 13

20 – 7 = 13

5 + 5 + 3 = 13



Fourteen take away one equals what?

Learning Environment

- Provide materials and manipulatives that promote and support mathematics such as pencils, paper, rulers, tape measures, counters, dice, dominos, and a whiteboard etc

- Create a “homework spot” in a well-lit spot where your child can study and do homework.

DICE GAMES-

1. Greedy Pig
2. Thirteen dice

The opportunities ARE there

Everyday Activities

Supermarket...

- Handle money
- Read price labels.
- Calculate the total/change
- Compare prices.
- Round up or down a price.
- Provide a budget.
- If we each have 2 slices of bread how much bread do we need to buy?

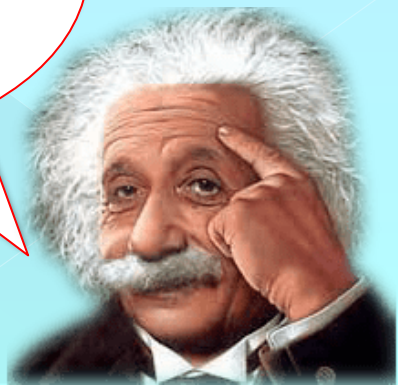
At home...

- Telling the time-
- News/weather
- Story books
- Cleaning!
- Board games
- Lego
- Puzzles
- Role playing
- IPads
- Art/craft

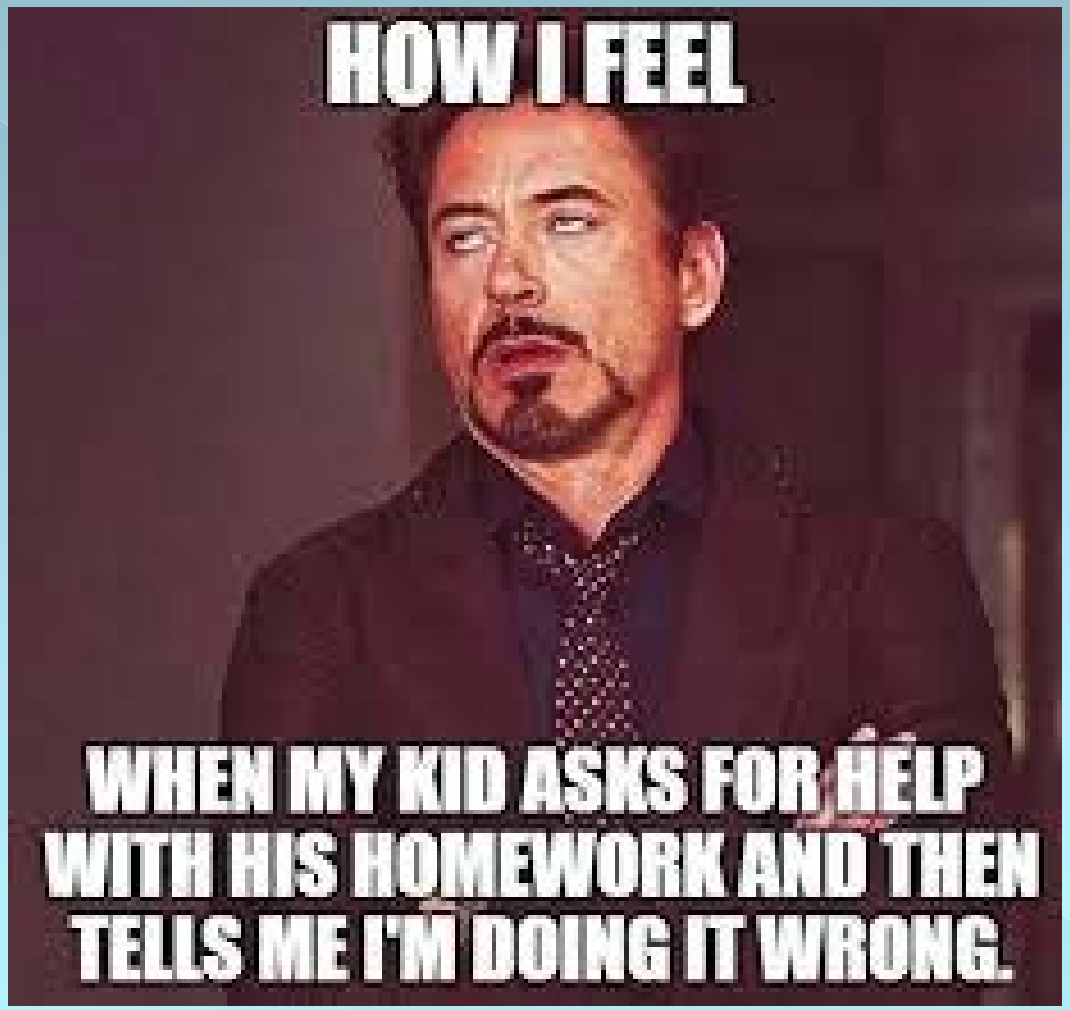
In the Kitchen...

- Double/half a recipe
- Weigh ingredients.
- Setting the table
- Use a conversion chart on the fridge
- Discuss ratios e.g. 2 parts flour 1 part milk
- Stacking containers
- Count backwards on the microwave.

Is it OK to stray into other subjects?

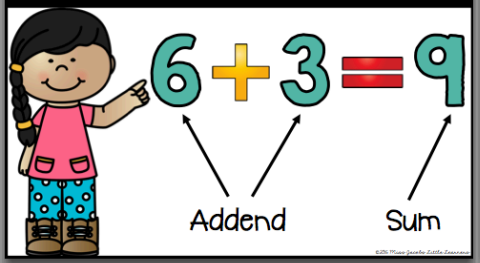


CARD GAME - Salute

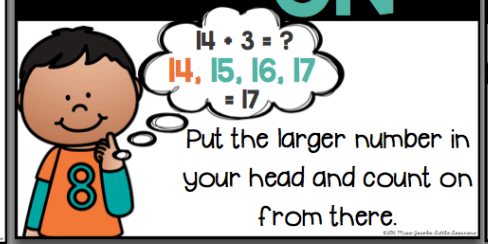

HOW I FEEL
WHEN MY KID ASKS FOR HELP WITH HIS HOMEWORK AND THEN TELLS ME I'M DOING IT WRONG.

Strategies

NUMBER SENTENCE



Count ON



Put the larger number in your head and count on from there.

Near DOUBLES

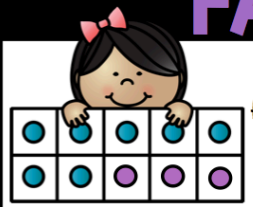
7 + 8 = ?
7 + 7 = 14
7 + 8 = 15

If you know that 7 + 7 = 14
Add 1 more and it makes 15

Count ALL

Combine all groups and count from 1.

Tens FACTS



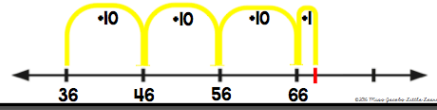
7 + 3 = 10

Use your tens facts knowledge to help you work out the problem.

Number LINE

Use a number line to use the 'jump' method. Jump by 10's and 1's.

36 + 31 = 67



Commutative PROPERTY

Switch the addends and the sum will always be the same.

21 + 14 = 35

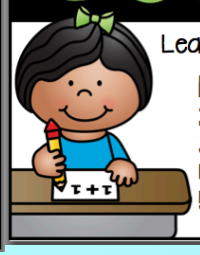
is the same as:

14 + 21 = 35

Use FINGERS

Use your fingers to help you work out the problem.

DOUBLES



Learn your doubles facts.

1 + 1 = 2	6 + 6 = 12
2 + 2 = 4	7 + 7 = 14
3 + 3 = 6	8 + 8 = 16
4 + 4 = 8	9 + 9 = 18
5 + 5 = 10	10 + 10 = 20

Bridge to 10

Bridge to 10, 100 or the nearest decade or multiple of 10.

28 + 5 = ?

to make 30

28 + 2 + 3 = 33

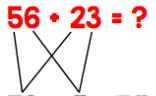
SPLITTING

Split the number into two parts and add each part separately.

56 + 23 = ?
50 + 20 = 70
6 + 3 = 9
70 + 9 = 79

OR

56 + 23 = ?



70 + 9 = 79

Learn the basics

Skip counting by 2s,5s, 10s, 100s

- *Chant/song*
- *Skipping/Hopscotch/hot potato*
- *Counting money*
- *Scoring points*
- *Buzz off hairy legs*
- *Paper chain*
- *Use a hundreds chart*

Start at any number!
Count forwards and backwards!

Friends of 10 and 20

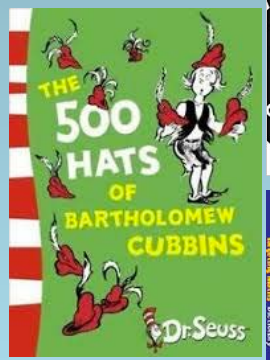
- *Snap/go fish*
- *Lego*
- *Bracelets*
- *Fingers*
- *Memory*
- *Flashlight tag*
- *Broken Calculator- the '2' button is broken!*
- *Clapping for 10*

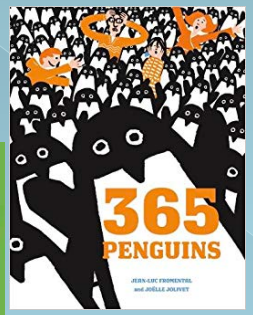
Doubles and near doubles

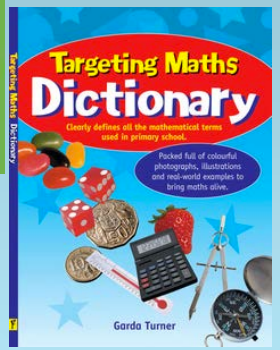
- *Rap song*
- *Mirror*
- *Roll doubles, play 'Double Down'*
- *Roll one die, double it, tally it, graph it*
- *Math toss*

Explore

Books







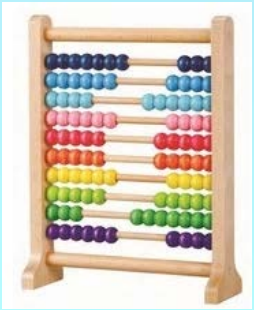
Holiday programs

NORTH SHORE
Coaching College

Fizzics Education
Since 2004
Science shows & workshops

bricks 4 kidz

Purchasing?



Sydney

AUSTRALIAN MUSEUM

Kidstuff
EST. 1969

Dominie
EDUCATIONAL SUPERSTORE

CARD GAME – Boxed Cards

Online Resources

http://www.schoolatoz.nsw.edu.au/

Glossary of mathematical language and help sheets

http://boardofstudies.nsw.edu.au

Syllabus

http://numeracycontinuum.com/

http://au.mathletics.com/

Online games – your child has a login.

https://www.matific.com/au/en-au/home/

https://www.studyladder.com.au/

http://www.copacabana-ps.com/maths.html

Interactive games

Top Tips for Parents

- Stay positive
- TALK
- There is more than one way
- Explore (on a budget!)
- Ask the teacher