Primary 3 and Primary 4 Assessment and Curriculum Sharing

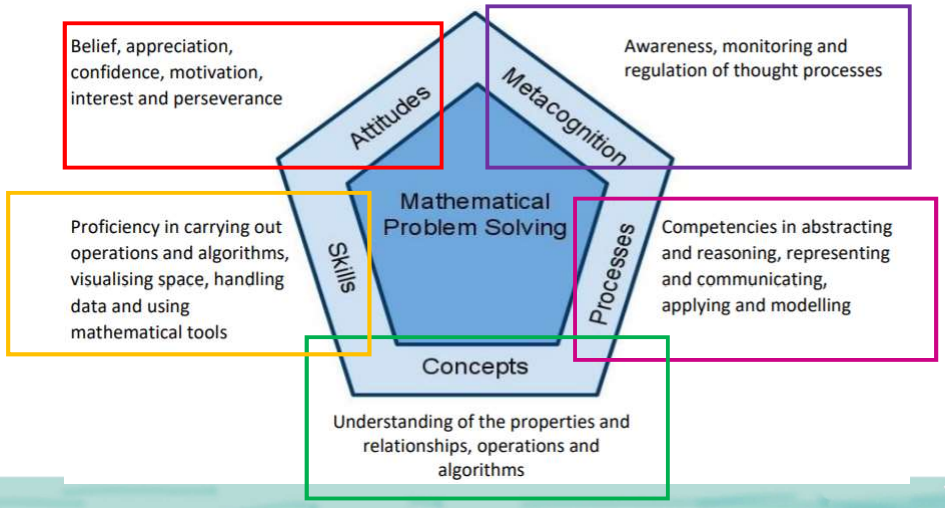
Mathematics

RIVERVALE PRIMARY SCHOOL

Overview

- Mathematics Curriculum Framework
- Primary 3 and 4 Assessment Matters
- Department Pedagogies
- Assessment Feedback to Parents
- Strategies to support students in learning Mathematics
- Common Errors

Mathematics Curriculum Framework



Primary 3 and 4 Assessment Format and Content

WA Format for Primary 3

Total Marks	Total number of questions	MCQ / SAQ		LAQ		Duration
		Number of questions	Marks per question	Number of questions	Marks per question	
30	17	16	1 to 2	1	3 to 4	50 min

End of Year Assessment Format for Primary 3

Total Marks	Total number of questions	MCQ / SAQ		LAQ		Duration
		Number of questions	Marks per question	Number of questions	Marks per question	
80	34 to 36	30	2	4 to 6	3 to 4	1 h 30 min

Assessment Content for Primary 3

Content	Weighting (%)
Whole Numbers	50
Fractions	10
Length, Mass, Volume	10
Area and Perimeter	7
Time	8
Money	5
Geometry	5
Bar Graphs	5
Total	100

Assessment Format for Primary 4

Total Marks	Total number of questions	MCQ / SAQ		LAQ		Duration
		Number of questions	Marks per question	Number of questions	Marks per question	
100	42 to 45	34 to 40	2	5 to 8	3 to 4	1 h 45 min

Assessment Content for Primary 4

Content	Weighting (%)
Whole Numbers	**25**
Decimals	**20**
Fractions	**15**
Geometry	**15**
Area and Perimeter	**10**
Time	**5**
Tables and Graphs	**10**
Total	**100**

Content in Primary 3	Content in Primary 4
Numbers to 10 000	Whole Numbers
Addition and Subtraction within 10 000	Factors and Multiples
Multiplication Tables of 6, 7, 8 and 9	Four Operations of Whole Numbers
Multiplication and Division	Fractions
Money	Angles
Length, Mass and Volume	Squares and Rectangles
Time	Decimals
Fractions	Four Operations of Decimals
Angles	Symmetry
Perpendicular and Parallel Lines	Area and Perimeter
Perimeter and Area	Tables and Line Graphs
Bar Graphs	Time

Cognitive Levels for Mathematics

Cognitive Levels In Assessment

Cognitive Levels		P3 (%)	P4 (%)
Level 1	Require students to recall mathematical facts, concepts, rules and formulae and perform straightforward computations.	40	35
Level 2	Require students to interpret information; understand and apply mathematical concepts and skills in a variety of contexts	50	45
Level 3	Require students to reason mathematically; analyse information and make inferences; select appropriate strategies to solve problems.	10	20

Department Pedagogies

(1) Concrete-Pictorial-Abstract (C-P-A) Approach

- **Enables students to encounter Math in a meaningful way and translate mathematical concepts from the concrete to the abstract**

Concrete	Pictorial	Abstract
A hands-on approach to use manipulatives to introduce a new idea or concept	Relate hands-on experiences to visual representations such as diagrams or models	Represent problems by using mathematical notation

(2) 7-Steps to Problem Solving

A structured method to effective problem solving

Step 1: Read the entire problem once.

Step 2: Write the answer statement with the appropriate unit, leaving a space for the answer.

Step 3: Read the problem again to identify the important information.
Underline key conditions and circle important numbers.

Step 4: Choose a suitable strategy.

Step 5: Organise the key information in the format for the strategy chosen.

Step 6: Write the equations and compute to solve the problem.

Step 7: Write and check that the answer makes sense.

Assessment Feedback to Parents

Assessment Feedback to Parents

At the end of each topic

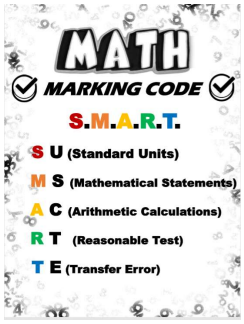
- unweighted assessments such as topical reviews, performance tasks or journals

Daily work:
- In-class work
- homework

Teachers' meetings with parents or other feedback channels

Provide Feedback that Moves Learners Forward

S.M.A.R.T code



SU (No units in their answer blank)

MS (Missing Mathematical Statements/equations)

AC (Wrong calculation in their workings)

RT (Check the reasonability of their answer)

TE (Transfer error in their statement/workings)

How to support your child in learning Mathematics?

What Can I Do As A Parent?

- **Active involvement in child's school work**

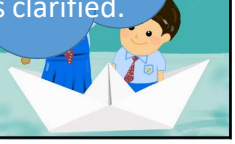
Ask your child to talk about and teach you math.

Use math with your child in daily life.

Communicate with your child's teacher.

Promote a positive attitude to math. Develop a growth mindset.

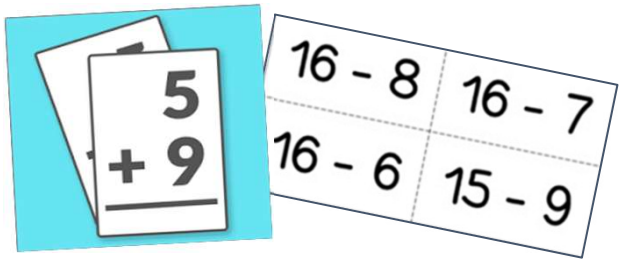
Ensure that homework is completed neatly and all doubts clarified.

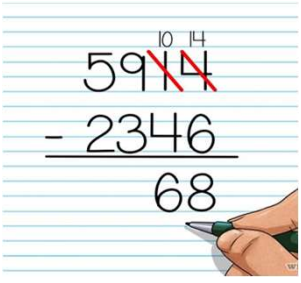


- Reading Math will not help in understanding Math
- Encourage your child to go through their corrections again, especially word problems.
- Encourage your child to show their working clearly, so that misconceptions in understanding can be spotted. (A correct answer does not mean that the concept is correct)
- Strengthen Factual Fluency

Improve Factual Fluency

- Practice addition and subtraction with regrouping facts





Improve Factual Fluency:

- Mental calculation using numbers around us

Improve Factual Fluency

- Speed recall of Multiplication/Division facts using games

B	I	N	G	O
18 ÷ 3 = ___	36 ÷ 9 = ___	45 ÷ 9 = ___	35 ÷ 5 = ___	21 ÷ 7 = ___
18 ÷ 2 = ___	49 ÷ 7 = ___	6 ÷ 3 = ___	64 ÷ 8 = ___	20 ÷ 4 = ___
54 ÷ 6 = ___	12 ÷ 6 = ___	Free Space	48 ÷ 6 = ___	18 ÷ 9 = ___
56 ÷ 7 = ___	30 ÷ 5 = ___	40 ÷ 5 = ___	32 ÷ 4 = ___	9 ÷ 3 = ___
27 ÷ 9 = ___	12 ÷ 3 = ___	12 ÷ 4 = ___	32 ÷ 8 = ___	21 ÷ 3 = ___

Multiplication/Division

- Students must be able to recall multiplication table in a forward and backward manner.

Forward:	Backward:
2 x 1 = 2	_____ x 2 = 2
2 x 2 = 4	_____ x 2 = 4
5 x 6 = 30	_____ x 6 = 30

- Practice long division and two digit multiplication

Primary 5 Topics
Whole Numbers, Fractions and Decimals
Ratio Percentage
Rate
Area of Triangles Volume
Angles Properties of triangles Parallelogram, Rhombus and Trapezium
Average

Topics where multiplication and division are critical

Koobits

- Encourage self-directed learning
- Students can learn at their own pace and can close gaps identified.
- Solutions are provided to guide students if they did the questions wrongly.
- Students are encouraged to try the same skill again, if they have not mastered the skill.
- Allocate 15 to 20 min on Koobits daily.

Problem Solving

- Encourage your child to explain how to do the questions.
- Can you explain how you did this question?
- How do you draw the model?
- Is there another way of doing this question?

Common Errors

Common Errors

- Conceptual misunderstandings
- Miscommunication in Mathematics

Common Conceptual Misunderstanding

Topic: Whole Numbers (Place Value)

Question:

In 3689, the digit '6' is in the

600 ✗ place.

Common Conceptual Misunderstanding

Topic: Whole Numbers (Place Value)

Question:

Thousands	Hundreds	Tens	Ones
3	6	8	9

In 3689, the digit '6' is in the

hundreds ✓ place.

Common Conceptual Misunderstanding

Topic: Decimals (Place Value)

Question:

Which is greater, 5.301 or 5.31?

Answer: 5.301 ✗

Common Conceptual Misunderstanding

Topic: Decimals (Place Value)

Which is greater, 5.301 or 5.31?

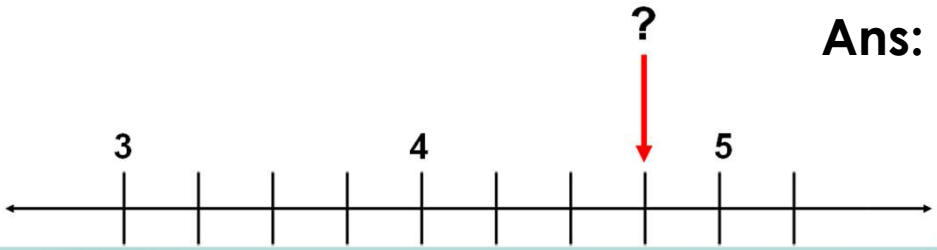
Ones	Tenths	Hundredths	Thousandths
5 .	3	0	1
5 .	3	1	0

Answer: 5.31 ✓

Common Conceptual Misunderstanding

Reading of Number Line

What is the missing number represented on the number line?

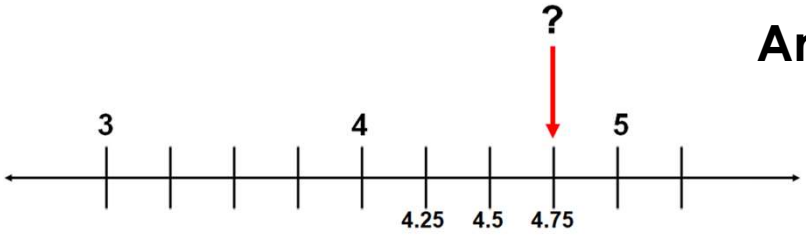


Ans: 4.8 ✗

Conceptual understanding

Reading of Number Line

Count the intervals between 4 and 5.
There are 4 parts. Each part stands for intervals of 0.25 or ¼



Ans: 4.75 ✓

Common Conceptual Misunderstanding

Topic: Fractions

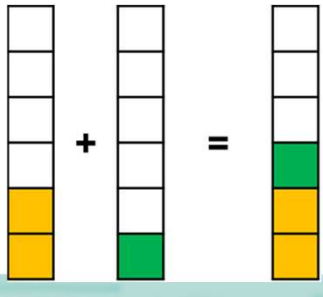
$$\frac{1}{3} + \frac{2}{6} = \frac{3}{9}$$ ✗

Student adds both the numerator and the denominator of the fraction together.

Common Conceptual Misunderstanding

Topic: Fractions

Use equivalent fractions to solve.



$$\frac{1}{3} + \frac{1}{6}$$

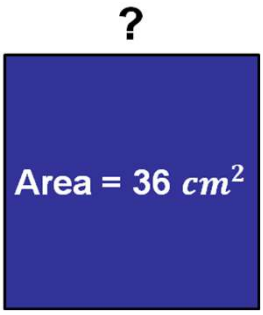
$$= \frac{2}{6} + \frac{1}{6}$$

$$= \frac{3}{6}$$ ✓

$$= \frac{1}{2}$$

Common Conceptual Misunderstanding

Topic: Area and Perimeter



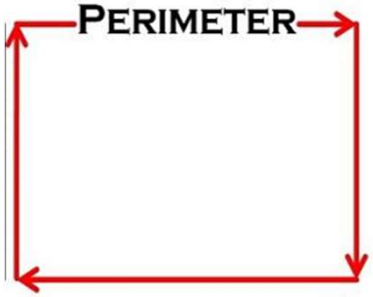
Find the length of the square.

Length of square = 36 ÷ 4
= 9 cm ✗

Common Conceptual Misunderstanding

Topic: Area and Perimeter

The area of a figure is the amount of space taken up by the figure.



The perimeter of a figure is the distance around it.

Common Conceptual Misunderstanding

Topic: Area and Perimeter

?

Find the length of the square

Length x Length = Area of square

6 x 6 = 36

Length of square = 6 cm

Common Conceptual Misunderstanding

Topic: Time

Sue exercises every morning.
She starts at 6.20 a.m. and ends at 8.00 a.m.
How long does she exercise?

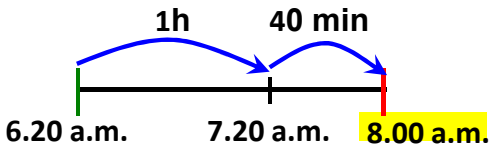
Hour	Min
8	0 0
6	2 0
1	8 0

Ans: 1 h 80 min

Common Conceptual Misunderstanding

Topic: Time

Write the **start** **OR** **end** time
Use **arrows** to show the time intervals.



Ans: 1 h 40 min

Miscommunication in Mathematics

- Wrong use of equal signs in mathematics

Wrong ✗	Right ✓
$\frac{1}{5} = 15$	$\frac{1}{5} \rightarrow 15$

Miscommunication in Mathematics

- Wrong use of equal signs in mathematics

Jane had 30 sweets. She gave 12 sweets to her brother and gave the rest to each of her 6 friends. How many sweets did each of her friend receive?

$30 - 12 = 18 \div 6 = 3$ ✗ Wrong use of equal sign

$30 - 12 = 18$ ✓

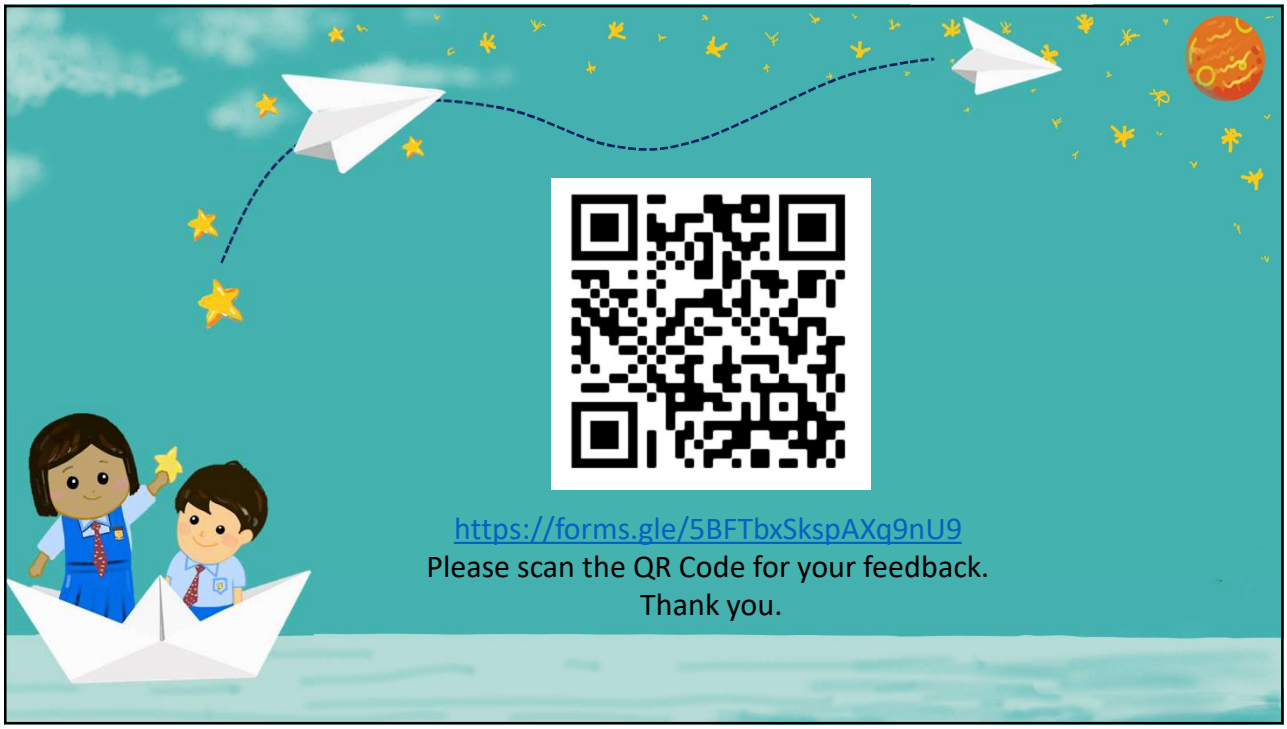
$18 \div 6 = 3$

Miscommunication in Mathematics

Wrong Use of Mathematical Statement

(Dollars and Cents Sign) $, ¢

Wrong ✗	Right ✓
500 ¢ = $5.00¢	500 ¢ = $5 or $5.00
240 ¢ = $2.40¢	240 ¢ = $2.40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Please scan the QR Code for your feedback.
Thank you.


THANK
YOU