

Mathematics Requirements for Primary 6

(Standard and Foundation Math)



OUTLINE

- ✓ PSLE Math topics and format
- ✓ Math Curriculum Framework
- ✓ Example of PSLE questions
- ✓ Study tips



PSLE Topics

Standard Mathematics	Foundation Mathematics
1. Numbers (include Fractions and Decimals)	1. Numbers (include Fractions and Decimals)
2. Measurement (include length, mass, area and volume)	2. Measurement (include length, mass, area and volume)
3. Data Analysis (include graph and pie chart)	3. Data Analysis (include graph and pie chart)
4. Geometry (include angles and shapes)	4. Geometry (include angles and shapes)
5. Percentage and Ratio	5. Percentage
6. Algebra	
7. Speed	
8. Nets	

PSLE Format (Standard Math)

Paper	Booklet	Item Type	No. of questions	No. of marks per question	Total marks	Duration
1	A	Multiple-choice	10	1	10	1 h
			5	2	10	
	B	Short-Answer	5	1	5	
			10	2	20	
2		Short-Answer	5	2	10	1 h 30 min
		Structured/ Long-Answer	12	3, 4 or 5	45	
Total			47	-	100	2 h 30 min

Note:

- The use of an approved calculator is allowed in Paper 2 but not in Paper 1.

PSLE Format (Foundation Math)

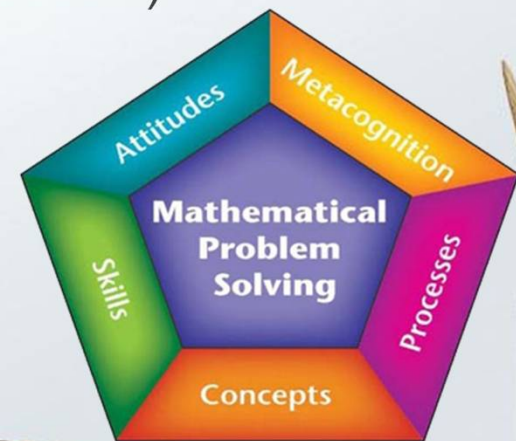
Paper	Booklet	Item Type	No. of questions	No. of marks per question	Total marks	Duration
1	A	Multiple-choice	10	1	10	1 h
			10	2	20	
	B	Short-Answer	10	2	20	
2		Short-Answer	10	2	20	1 h
		Structured	6	3 or 4	20	
Total			46	-	90	2 h

Note:

- The use of an approved calculator is allowed in Paper 2 but not in Paper 1.

Key Aspects in Math Curriculum

- ❖ Mathematical Concepts
- ❖ Skills
- ❖ Math processes (reasoning, communication)
- ❖ Metacognition
- ❖ Attitudes (belief, perseverance)



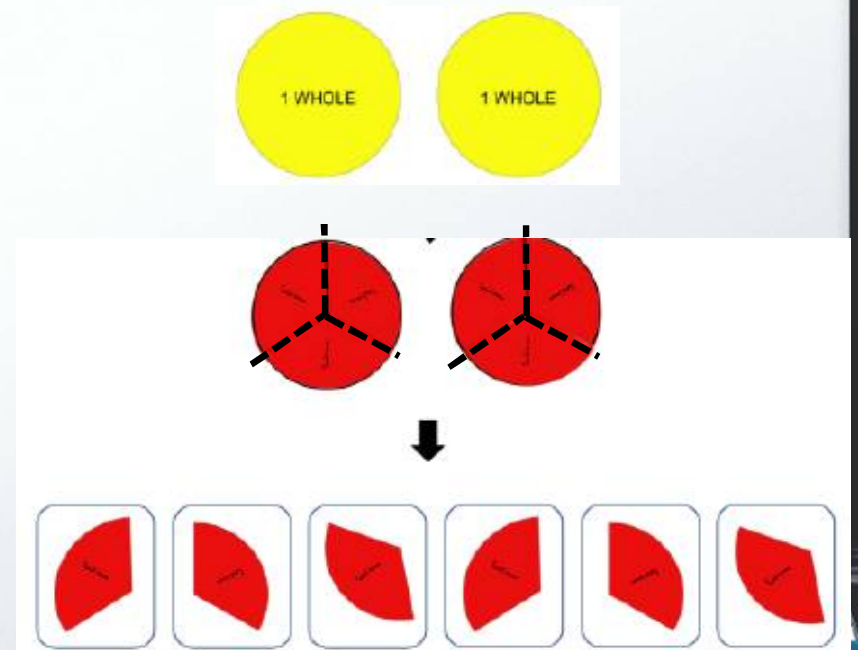
Emphasis on Mathematical Concept and Reasoning

- Division of fractions

$$2 \div \frac{1}{3} = 2 \times \frac{3}{1} = 6$$

How many groups of $\frac{1}{3}$
are there in 2 wholes?

Ans: 6



Example of PSLE Math Questions



PSLE MA Paper 1 (MCQ)

In the number 43.21, which digit is in the tens place?

- (1) 1
- (2) 2
- (3) 3
- (4) 4

Skills required:

- Recall of concept of decimals

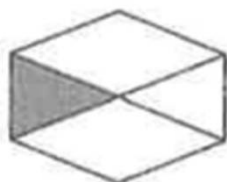
Ans: (4)

PSLE MA Paper 1 (MCQ)

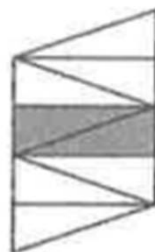
Which of the following shows $\frac{1}{4}$ of the figure shaded?



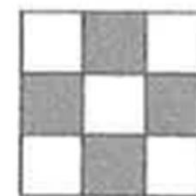
(1)



(2)



(3)



(4)

Ans: (3)

Skills / concepts required:

- Fraction as equal parts of a whole
- Equivalent fractions

PSLE MA Paper 1 (short-answer)

The table shows the number of male and female members in a club in June.
The number of female adults is not shown.

Age Group	Number of members in June	
	Male	Female
Youth (Below 20 years)	15	28
Adult (20 to 59 years)	15	?
Senior Citizen (60 years and above)	32	44

- (a) 50% of all the female members in the club were adults.
How many female adults were there in the club?

The table shows the number of male and female members in a club in June.
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Age Group	Number of members in June	
	Male	Female
Youth (Below 20 years)	15	28
Adult (20 to 59 years)	15	? 50%
Senior Citizen (60 years and above)	32	44

Skills/ concepts required:
- Reading of table (data analysis)
- Concept of percentage

- (a) 50% of all the female members in the club were adults.
How many female adults were there in the club?

(a) Female youth + SC \rightarrow 50% of total adults
Female adult = $28 + 44 = 72$

The table shows the number of male and female members in a club in June.
The number of female adults is not shown.

Age Group	Number of members in June	
	Male	Female
Youth (Below 20 years)	15	28
Adult (20 to 59 years)	15	? 50%
Senior Citizen (60 years and above)	32	44

Skills/ concepts required:

- Reading of table (data analysis)
- Concept of percentage
- Concept of fractions

(b) In July, some female adults left the club. There was no change in the number of members in the other 5 groups. Did the percentage of male members in the club increase, decrease or remain the same from June to July?

male → remain
total → decrease

Ans: increase

PSLE MA Paper 1 (short-answer)



Skills/ concepts required:

- Concept of money
- Grouping concept
- Concept of ratio / proportion

Mrs Lim took home 120 eggs. She paid \$4.80 less with the special offer.
What was the price of 10 eggs without the special offer?

PSLE MA Paper 1 (short-answer)



1 set → 12 eggs

Mrs Lim took home 120 eggs. She paid \$4.80 less with the special offer.
What was the price of 10 eggs without the special offer?

10 sets → 120 eggs
(buy 100 + free 20)

20 free eggs cost \$4.80
10 eggs cost $\$4.80 \div 2 = \underline{\underline{\$2.40}}$

Skills/ concepts required:

- Concept of money
- Grouping concept
- Concept of ratio / proportion

PSLE Paper 2

A small circle with centre O has been cut from a circular piece of cardboard with the same centre. The radius of the small circle is 8 cm.

The remaining cardboard is then cut into four equal parts along the dotted lines as shown in Figure 1. The four parts are rearranged to form a new shape in Figure 2.

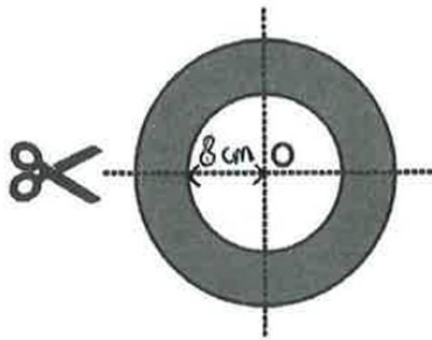


Figure 1

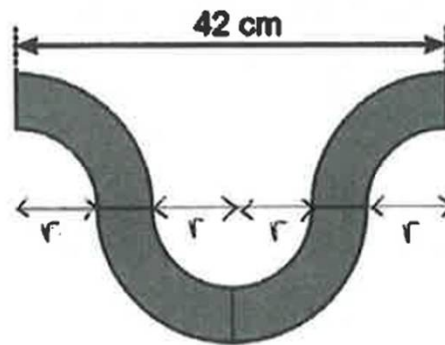


Figure 2 (new shape)

(a) Find the area of the new shape.

Skills/ concepts required:

- Concept area and perimeter
- Visualisation skills

PSLE Paper 2

A small circle with centre O has been cut from a circular piece of cardboard with the same centre. The radius of the small circle is 8 cm.

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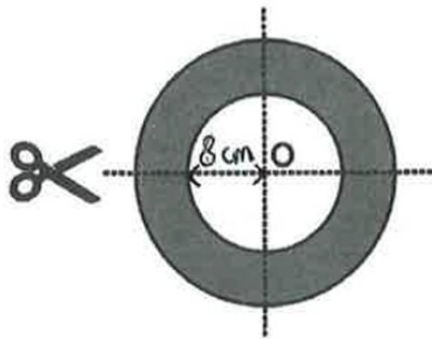


Figure 1

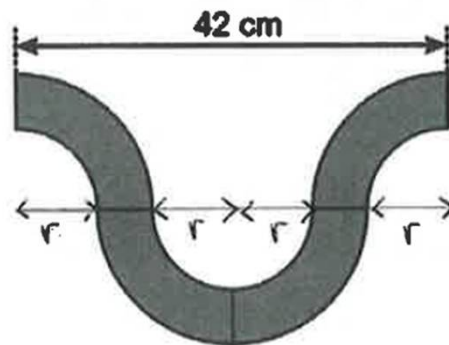


Figure 2 (new shape)

(a) Find the area of the new shape.

$$\begin{aligned}\text{Thickness} &= (42 - 4 \times 8) \div 2 \\ &= 10 \div 2 \\ &= 5 \text{ cm}\end{aligned}$$

$$\begin{aligned}r(\text{small}) &= 8 \text{ cm} \\ r(\text{big}) &= 13 \text{ cm}\end{aligned}$$

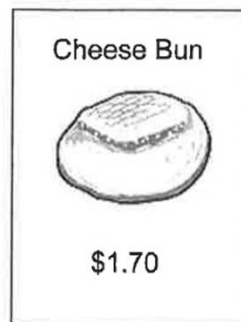
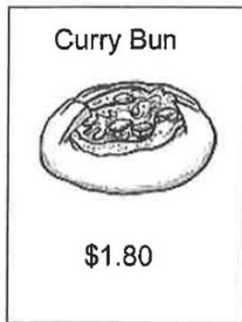
$$\begin{aligned}\text{Area (small)} &= 3.14 \times 8 \times 8 \\ &= 200.96\end{aligned}$$

$$\begin{aligned}\text{Area (big)} &= 3.14 \times 13 \times 13 \\ &= 530.66\end{aligned}$$

$$\begin{aligned}530.66 - 200.96 \\ = \underline{\underline{329.7 \text{ cm}^2}}\end{aligned}$$

PSLE Foundation Math Paper

Yummy Bakery and Zen Bakery sell buns at the prices shown.



Yummy Bakery

Sale
Buy 3 buns, Pay for 2
The cheapest bun will be free

Zen Bakery

Sale
20% discount on ALL buns

Skills/ concepts required:

- Concept money
- Concept of percentage

Yummy Bakery

The cheapest bun is free
→ kaya bun

$$\begin{aligned} \text{Total} &= \$1.80 + \$1.70 \\ &= \underline{\underline{\$3.50}} \end{aligned}$$

Mabel bought one bun of each type from Yummy Bakery during the sale.

How much did Mabel pay?

How To Do Well In Examination

- Study all important information in the problem, e.g. **annotate** or underline key words.
- Practice time management skill. Skip questions when unsure and return to complete them later on.
- Attempt all questions. Show all the Math equations and workings.
- Familiarise the functions required in calculators.
- Check the accuracy of the work, e.g. number transfer, unit of measurements, calculation.



Mathematical Problem Solving Approach

1. Study

- What am I given?
- What am I asked to find?
- How can I retell the problem in my own words?

2. Think

- What is the topic / concept used?
- What strategy should I use?
- Can I use diagram or model?

3. Act

- What are the steps / equation?
- Have I written down the equations?

4. Reflect

- Does my answer make sense?
- Did I check for unit and calculation?
- Can I solve it differently?

Common Mistakes Made By Students

1. Transfer error

Example: $9 \times \$12 = \108

\swarrow
 $\$100 \div 2 = \50

2. Omission or incorrect units of measurement

Example: $1 \text{ km} = 100 \text{ m}$ (Wrong Fact)

Common Mistakes Made By Students

3. Writing incorrect Math equations

Example: $\underline{20 + 10} = 30 + 5 = \underline{35}$

← not equal →

(Wrong equations as the 2 steps are combined into one)

How Parents Can Support Their Child

☐ Monitor the homework completion

* Get your child to present his / her work clearly and systematically

☐ Encourage your child to have regular revision

* Re-attempt questions where corrections have been done (independent work)

* Get the formula right, e.g. Area (rectangle) = $L \times B$

* Commit certain facts into memory, e.g. $0.5 = \frac{1}{2} = 50\%$

☐ Build time management skills

* When doing a timed practice, get your child to complete the practice within the given time



Thank you

For further queries, you may consult
your child's Math teacher.

