Subject Requirements for PSLE

MATHEMATICS


OUTLINE

- PSLE Math topics and format
- Primary Math Curriculum Framework
- Types of PSLE questions
- 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.

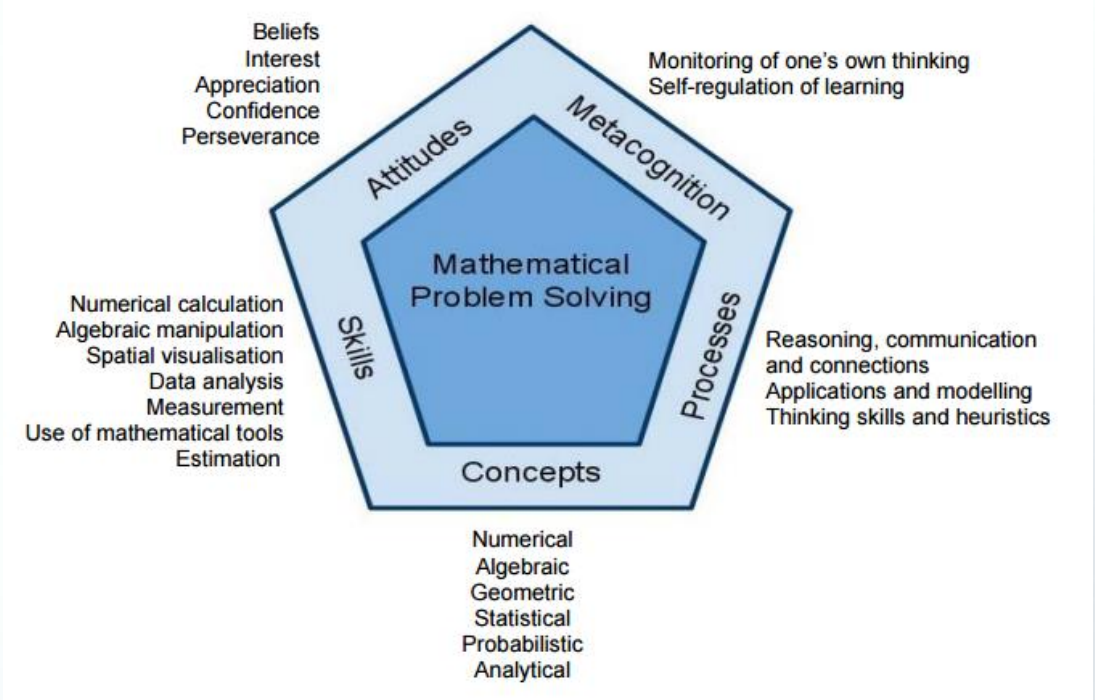
PSLE Format (Foundation Math)

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.

Singapore Math Curriculum Framework



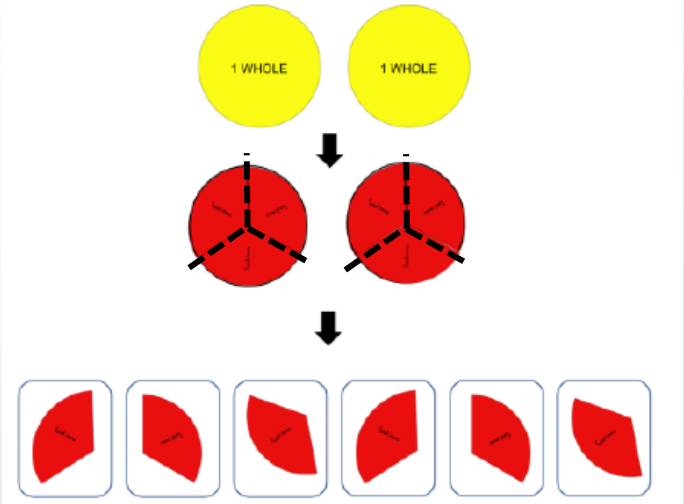
Emphasis on Mathematical Concept and Reasoning

- Division of fractions

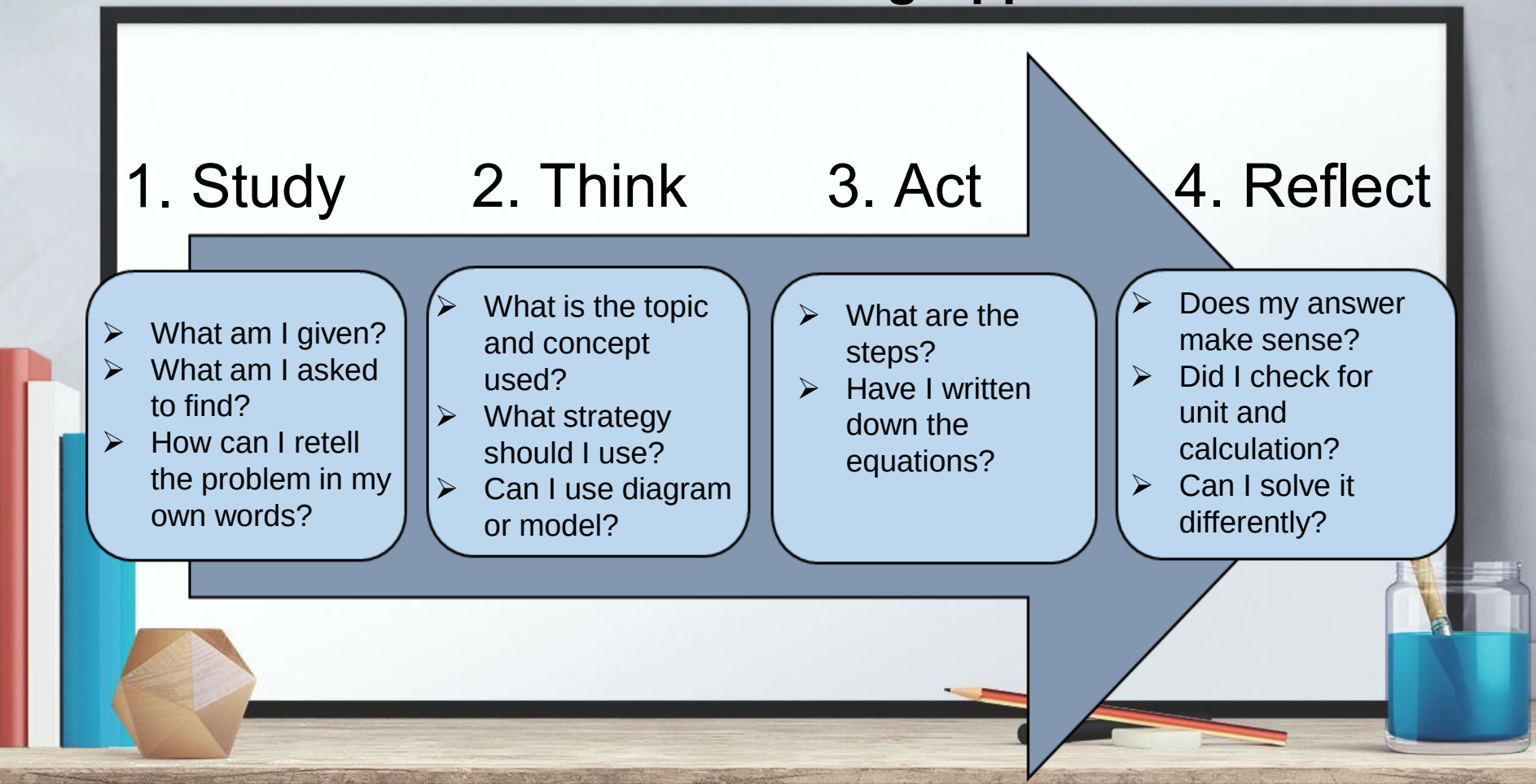
$$2 \div \frac{1}{3} = 2 \text{ x} \frac{3}{1} = 6$$

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

Ans: 6



Mathematical Problem Solving Approach



Types of Math Questions

- **Recall and perform computation**

Recall mathematical facts, concepts, rules and formulae; perform straightforward computations

- **Understand and apply**

Interpret information; understand and apply mathematical concepts and skills in a variety of contexts.

- **Reason and analyse**

Reason mathematically; analyse information and make inferences; select appropriate strategies to solve problems

Topics: Numbers (Decimals)
Item type: Recall concepts

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

(1) 1

(2) 2

(3) 3

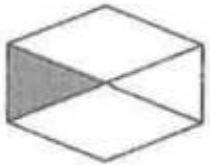
(4) 4

Ans: (4)

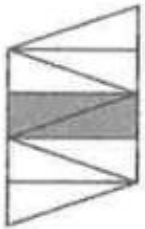
Topics: Numbers (Fractions)
Item type: Recall facts and concepts

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

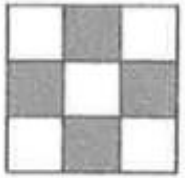
(1)



(2)



(3)

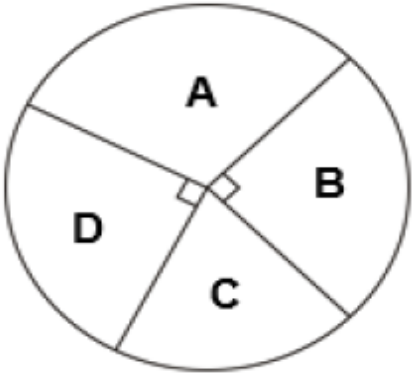


(4)

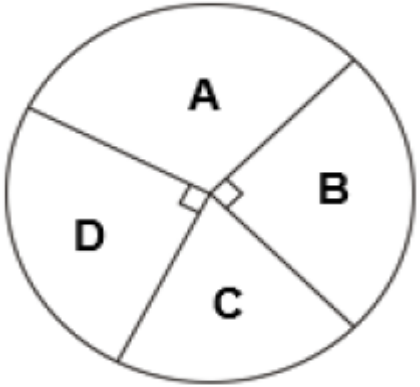
Ans: (3)

Topics: Data analysis (Pie chart)
Item type: Understand and apply mathematical concept

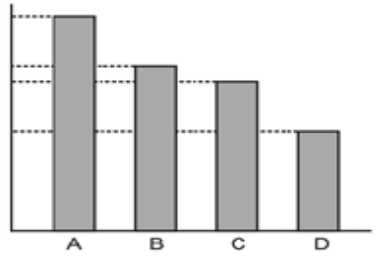
The pie chart shows the number of four types of pens sold by a shop last week.



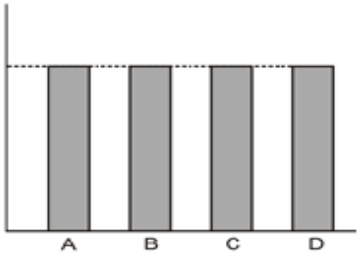
Which bar graph best represents the information in the pie chart?


A
B
C
D

(1)


Number of pens sold
A
B
C
D

(2)


Number of pens sold
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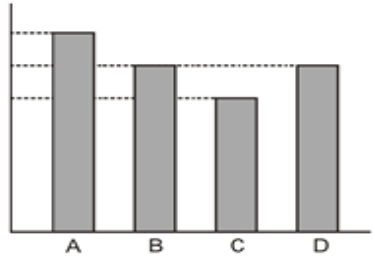
(3)


Number of pens sold
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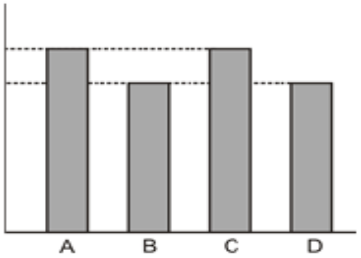
D

(4)


Number of pens sold
A
B
C
D

Ans: (3)

Topics: Numbers
Item type: Understand and apply mathematical concept

Lucy had an equal number of gold stars and silver stars. She gave 26 gold stars and 14 silver stars to Maggie. She gave the remaining stars to Nick. Nick was given 1 gold star for every 3 silver stars. How many stars did Lucy have at first?

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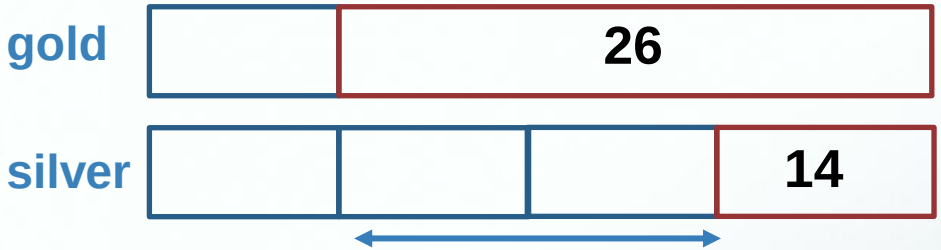


Strategy:
- model drawing
- work backwards

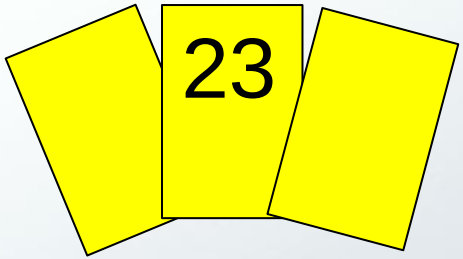
2 units = 26 – 14
= 12
1 unit = 6

4 units + 26 + 14 = 24 + 26 + 14
= 64

Lucy had **64 stars at first**.

Topics: Numbers
Item type: Analyse information, apply appropriate strategies

Each of the three cards shown is printed with a different whole number. The smallest number is 23. When these numbers are added two at a time, the sums are 61, 71 and 86. What is the largest number on the cards?



Each of the three cards shown is printed with a different whole number. The smallest number is 23. When these numbers are added two at a time, the sums are 61, 71 and 86. What is the largest number on the cards?

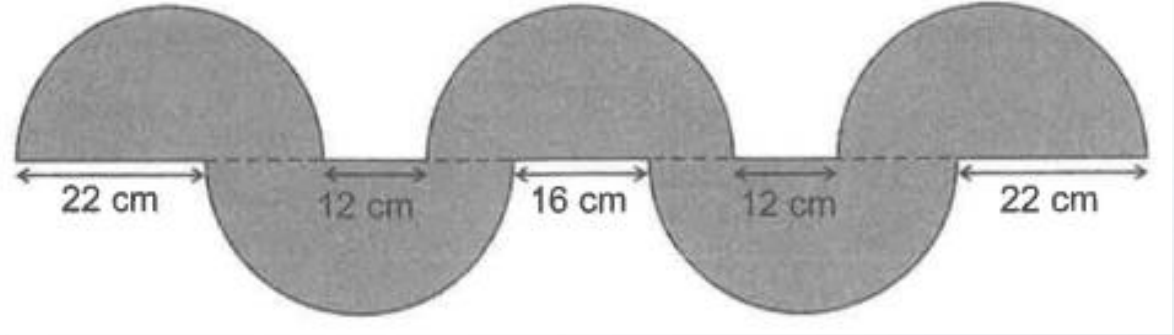
__ + __ = 61
__ + __ = 71
__ + __ = 86

Mathematical reasoning:
In order to get 71, you need to add the smallest and the biggest number

71 – 23 = 48
The largest number is 48.

Item type: Analyse information, apply appropriate strategies

The figure is formed by 5 identical semicircles.



(a) What is the diameter of each semicircle?

(b) Use the calculator value of π to find the perimeter of the figure. (round your answer to 2 decimal places)

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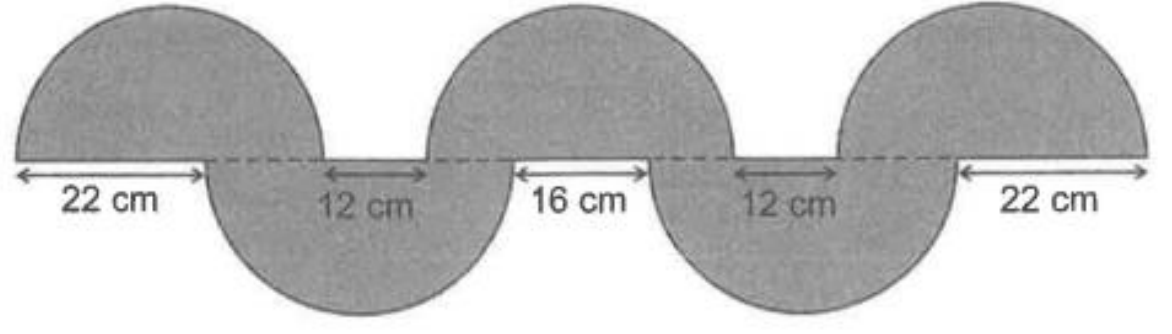

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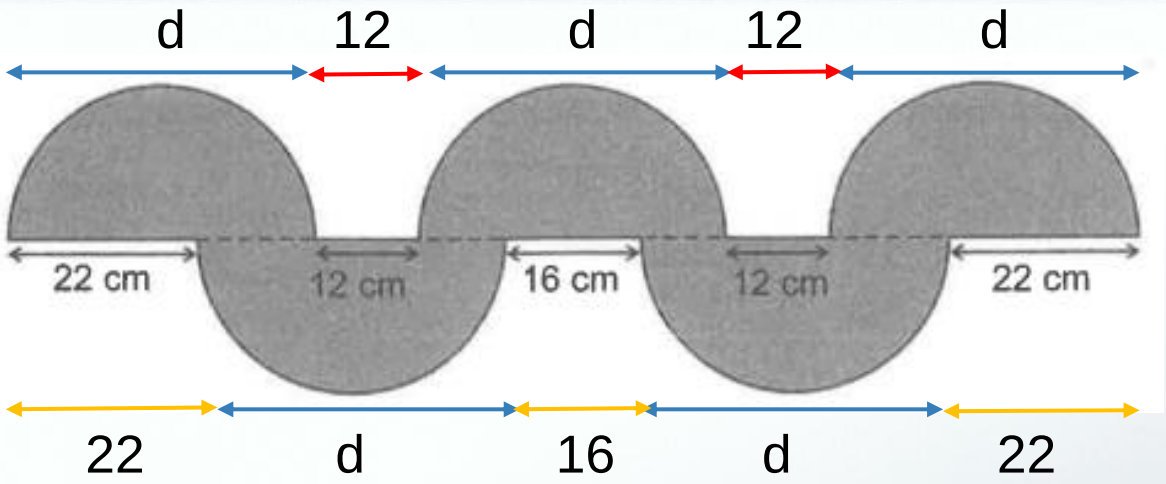
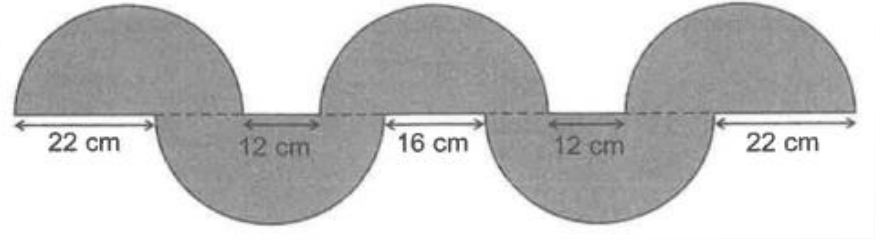


d	d	d	12	12
d	d	22	16	22

(a) What is the diameter of each semicircle?

(b) Use the calculator value of π to find the perimeter of the figure. (round your answer to 2 decimal places)



d	d	d	**12**	**12**

d	d	**22**	**16**	**22**

(a) d = (22 + 16 + 22) – (12 + 12)
= 60 – 24
= 36 cm

(b) Perimeter of 5 semicircle
= 5 x ½ x π x 36
= 90π cm

Perimeter of the figure
= 90π + 60 + 24
≈ 366.74 cm
(2 decimal places)

How To Do Well In Examination

- Study all important information in the problem, e.g. **annotate** or underline key words.
- Do not dwell too long on a question. 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.

Common Mistakes Made By Students

1. Transfer error
   Example: 9 x $12 = $108

   $100 ÷ 2 = $50

2. Omission or incorrect units of measurement
   Example: 1 km = 100 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 for previous mistakes
  * Get the formula right, e.g. Area (rectangle) = L x B
  * Commit certain facts into memory, e.g. 0.5 = ½ = 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.