

Terry Chew B. Sc

Olympiad Maths Trainer

9 - 10 years old

3

- Designed to Prepare Students for the Mathematical Olympiad and Other Mathematical Competitions
- Systematic Training to Tackle Mathematical Olympiad type Problems
- 50-Week Practice to Build Confidence
- 2 Tests for Self-assessment
- Worked Solutions for Analysis and Learning
- Perforated Tear-off Pages for Easy Removal and Filing

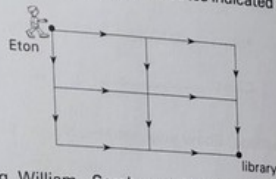


OXFORD



UNIVERSITY PRESS

4. How many different ways are there for Eton to go to the library if he can only take the routes indicated by the arrows?



5. Among William, Sarah and Hayden, only one of them watched the movie 'Harry Potter and the Order of the Phoenix'. When Jane asked the three friends about the movie, they gave her the following answers.

William: Sarah watched the movie already.

Sarah: I haven't got a chance to watch it.

Hayden: Maybe I will watch it next week.

Only one of them told the truth. Who had watched the movie?

If William had watched the movie,

	Lie	Truth
William		
Sarah		
Hayden		

If Sarah had watched the movie,

	Lie	Truth
William		
Sarah		
Hayden		

If Hayden had watched the movie,

	Lie	Truth
William		
Sarah		
Hayden		

6. Compute each of the following using a simple method.

a) $1 + 2 + 3 + 4 + 5 + 6$ (b) $2 + 4 + 6 + 8 + 10 + 12$

(c) $3 + 5 + 7 + 9 + 11 + 13$ (d) $3 + 8 + 13 + 18 + 23 + 28$

OLYMPIAD MATHS TRAINER 3

WEEK 2



Name: _____ Date: _____

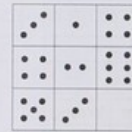
Class: _____ Marks: _____/24

Solve these questions. Show your working clearly. Each question carries 4 marks.

1. Are you able to trace the figure below without lifting your fingers off the paper? You are not allowed to trace any line segments more than once.



2. Draw the missing pattern in the box below.



3. All the Primary 3 students at Russels Elementary School subscribe to at least one magazine.

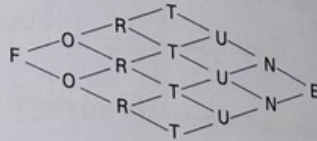
150 students subscribe to Wildlife.

208 students subscribe to A-Star Maths.

88 students subscribe to both magazines.

How many Primary 3 students are there at Russels Elementary School?

4. In the figure below, each letter is connected to another by a straight line. How many different ways are there to form the word "FORTUNE"? A straight line must connect two letters at all times.



5. The prince has hidden the princess' diamond ring in one of the three jewellery boxes. Each box is labelled as follows:

Box A: The ring is not in here.

Box B: This box is empty.

Box C: The ring is in Box A.

Only one jewellery box has the correct label. Help the princess to find the ring.

If the ring is in A,

	Right	Wrong
A		
B		
C		

If the ring is in B,

	Right	Wrong
A		
B		
C		

If the ring is in C,

	Right	Wrong
A		
B		
C		

6. Compute each of the following using a simple method.

- (a) $1 + 2 + 3 + 4 + \dots + 9 + 10$
 (b) $1 + 3 + 5 + 7 + 9 + 11 + 13 + 15$
 (c) $2 + 4 + 6 + 8 + 10 + 12 + 14 + 16$
 (d) $11 + 12 + 13 + \dots + 19 + 20$



Name: _____ Date: _____

Class: _____ Marks: _____/24

Solve these questions. Show your working clearly. Each question carries 4 marks.

1. Is it possible to trace the figure below without lifting your fingers off the paper? You are not allowed to trace any line segments more than once.



2. Draw the missing pattern in the box below.



3. Lina's granny rears a hen that lays an egg every day. She then cooks 2 eggs for Lina every morning. On 1st May, her granny has collected 20 eggs. How long can the eggs last them?

Week 26 to Week 34

- Tricks in Addition and Subtraction
- Catching up
- Encountering
- Finding Perimeter
- Excess-and-Shortage Problems
- Pigeonhole Principle

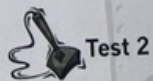
Week 35 to Week 43

- Chicken-and-Rabbit Problems
- Solve By Replacement
- Make a List or Table
- Solve By Comparison
- Geometry
- Cryptarithm

Week 44 to Week 49

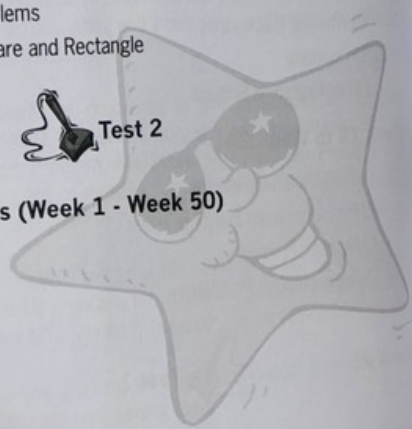
- Remainder Problems
- Time
- Average Problems
- Areas of Square and Rectangle

Week 50



Test 2

Worked Solutions (Week 1 - Week 50)



OLYMPIAD MATHS TRAINER 3

WEEK 1

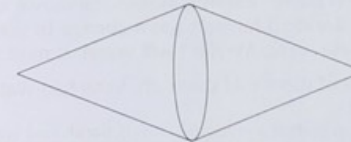


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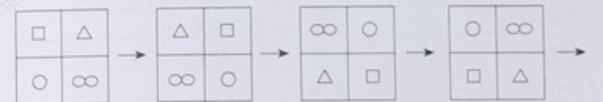
Class: _____ Marks: _____/24

Solve these questions. Show your working clearly. Each question carries 4 marks.

1. Are you able to trace the figure below without lifting your fingers off the paper? You are not allowed to trace any line segments more than once.



2. Draw the next pattern.



3. It takes 5 minutes to fry a pancake. One side of the pancake takes 3 minutes to fry and the other side takes only 2 minutes. Two pancakes can be placed on the frying pan at a time. What is the shortest time to fry all five pancakes?

4. In the figure below, each letter is connected to another by a straight line. How many different ways can letters from the word "MATHS" be drawn without crossing any letters at all times.



5. The prince has hidden the princess' diamond ring in one of the three jewelry boxes. Each box is labeled as follows:

- Box A: The ring is not in here.
 Box B: This box is empty.
 Box C: The ring is in Box A.

Only one possibility has the correct label. Help the princess to find the ring.

If the ring is in A,

	Right	Wrong
A		
B		
C		

If the ring is in B,

	Right	Wrong
A		
B		
C		

If the ring is in C,

	Right	Wrong
A		
B		
C		

Compute each of the following using a simple table.

- a) $1 + 2 + 3 + 4 + \dots + 9 = 10$
 b) $1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 = 15$
 c) $2 + 4 + 6 + 8 + 10 + 12 + 14 + 16$
 d) $10 + 12 + 14 + \dots + 18 = 20$

QUIZTIME! MASTER THOUGHTS 1

WEEK 3



Name: _____ Date: _____
 Class: _____ Marks: _____/24

Solve these questions. Show your working clearly. Each question carries 4 marks.

1. Is it possible to trace the figure below without lifting your fingers off the paper? You are not allowed to trace any line segment more than once.



2. Solve the missing pattern in the box below.



3. Lisa's grandma owns a hen that lays an egg every day. She then counts 2 eggs for Lisa every morning. On 1st May, her granny has collected 20 eggs. How long can the eggs last them?