

Elementary – Grade 6

5 Math Strategies

For My Year-End
Exam Preparation

Daniel Desrosiers
Marie-Michèle Darche



French Edition

Product Owner

Anne Marchand

Managing Editor

Natacha Auclair

Project Editor

Nicolas Therrien

Proofreader

Danielle Maire

Rights and Permissions Coordinator

Marie-Chantal Laforge

Book and Cover Design

Benoit Pitre

Graphic Design

2NSB Design graphique

Electronic Publishing

Catherine Boily

Photo Credits

BIGSTOCK: p. 11: piotrwytazek

SHUTTERSTOCK: p. 10 (t): Herman Wong HM;

p. 10 (b): Domianick; p. 14: Kristini

English Edition

Product Owner

Anne Marchand

Translator and Project Editor

Patricia Hynes

Proofreader

Laurel Sparrow

Rights and Permissions Coordinator

Marie-Chantal Laforge

Book and Cover Design

Benoit Pitre

Graphic Design

2NSB Design graphique

Electronic Publishing

Les Studios Artifisme

Photo Credits

BIGSTOCK: p. 11: piotrwytazek

SHUTTERSTOCK: p. 10 (t): Herman Wong HM;

p. 10 (b): Domianick; p. 14: Kristini

© ÉDITIONS DU RENOUVEAU PÉDAGOGIQUE INC., 2024

1611 Crémazie Boulevard East, 10th Floor

Montréal, Québec H2M 2P2

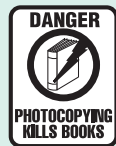
Canada

Telephone: 514 334-2690

Fax: 514 334-4720

info@erpi.com

erpi.com



All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of ÉDITIONS DU RENOUVEAU PÉDAGOGIQUE INC.

Registration of copyright—Bibliothèque et Archives nationales du Québec, 2024

Registration of copyright—Library and Archives Canada, 2024

Printed in Canada

1234567890 ITIB 27 26 25 24

ISBN 978-2-7661-5835-5 (PRJ009675)

This project is funded in part by the Government of Canada

Canada

LOGO
FSC

Get Ready!

This booklet was specially designed to help you prepare for the year-end math exam. You will practise 5 math strategies as you solve the 18 problems in the booklet and fill out the accompanying worksheets.

Here is a quick look at the 5 strategies you will apply.

1. Clear the fog



Imagine that the problem is hidden in fog but that it becomes clear to you, bit by bit. This strategy will help you make assumptions as you gradually discover different parts of the problem. Your assumptions will be about what the context, facts and conditions of the problem mean and about the results you may get.

2. Reconstruct the problem



You will use this strategy in situations where essential information is missing. You will have to think of the information you need to solve the problem; this will give meaning to the calculations you have to do.

3. Assemble the puzzle



This strategy will help you present your work logically and clearly. To solve the problem, you will have a set of paper strips to put in order, as if you were doing a jigsaw puzzle.

4. Make lists



This strategy will help you make a list of the facts and conditions you will have to consider to solve the problem. If it is helpful, you can also include the steps you will take.

5. Create a solution map



By applying this strategy, you will practise grouping related information in a solution map so you can solve the problem part by part.

Table of Contents

Competency 1














Competency 2

Activity	Math Strategy	Page
1. The Canoe-Camping Trip	 	2
2. The Destination Mosaic	 	4
3. Summer Fun	 	6
4. Making Slime	 	8
5. Trees at Risk	 	10
6. The Technology Fair	 	12
7. The Compost Bag Campaign	 	14
8. Colourful Carrots	 	16
9. An Eco-friendly Week	 	18

Table of Contents *(cont'd)*

Competency 1

Competency 2

Activity	Math Strategy	Page
10. The Long Jump Event	 	20
11. The Fitness Room	 	22
12. The Climbing Walls	 	24
13. Drones at Work	 	26
14. A Fabulous Discovery	 	28
15. Underwater Archaeology	 	30
16. The Three Friends	 	32
17. The Street Mural	  	34
18. A Day at the Park	 	36

**1**

The Canoe-Camping Trip



▶ To fully understand the problem, first make assumptions.
Follow the steps on the last page of your booklet.

Your outdoor club has taken on a big challenge: a canoe-camping trip around the shores of gigantic Lake Bluewater.

You and your group plan to take the route called the Winding Way and complete the loop in 3 days and 2 nights. You can camp at one of the park's campsites or set up tents wherever wilderness camping is possible. Since you want to paddle no more than 40 km a day, you have to decide where you will stop to camp on each of the 2 nights of your trip.

A sign at the park entrance shows the different canoeing routes, but some information is missing.

Before the group sets out, you have to inform the park office of your plans. You have to fill out an itinerary indicating the distance you plan to travel each day and the places where you will stop for the night.



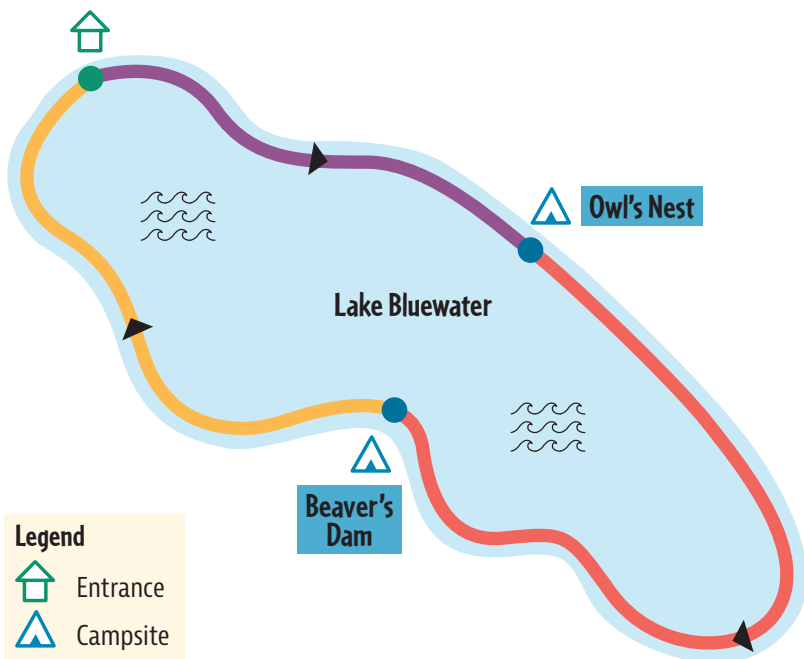
QUESTIONS

- ➡ How long is the Winding Way in all?
- ➡ Keeping in mind your canoeing limit of 40 km a day, how should you plan your itinerary if you want to spend one night at the Beaver's Dam campsite?

Information at the Park Entrance

Map of Lake Bluewater

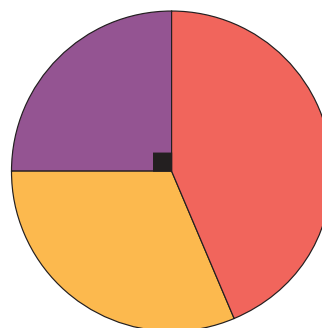
Winding Way starting point



Legend

- House icon: Entrance
- Triangle icon: Campsite

Section Lengths in the Winding Way



- Purple section: 28 km
- Red section: 75% longer than the purple section
- Orange section: $\frac{5}{7}$ of the red section

How can I calculate 75% more?



My Solution



Planned itinerary (distance to canoe each day): _____

**2**

The Destination Mosaic



This year, the back-to-school theme is “travel.” To mark the occasion, the Grade 6 students are assembling a mosaic on a wall in the school hallway. The mosaic will be made up of triangles representing the students’ dream destinations on 4 continents. Countries of the same continent will be represented by triangles of the same shape and colour.

Each student has to choose a destination country, cut out the right type of triangle from the right colour of cardboard and write the name of the country on the triangle. Then the students will assemble the triangles to create a work of art in the colours of the 4 continents.

QUESTION

➔ How many sheets of each colour of cardboard will the students need for all the triangles in the mosaic?

My Solution



The 2 classes will need _____ blue cardboard sheets,
_____ yellow sheets, _____ red sheets and _____ green
sheets to make all the triangles for the mosaic.

➔ To complete the task,
refer to page 5.

Facts of the Problem



Continent	Triangle to Cut Out
Africa	
Americas	
Asia	
Europe	



Countries Chosen by Mrs. Dupont's 24 Students, by Continent

Continent	Countries
Americas	$\frac{1}{8}$ of the countries
Asia	$\frac{1}{4}$ of the countries
Europe	$\frac{5}{12}$ of the countries
Africa	The rest of the countries

Countries Chosen by Mr. Ramsey's 28 Students, by Continent

Continent	Countries
Americas	$\frac{1}{7}$ of the countries
Asia	$\frac{1}{4}$ of the countries
Europe	$\frac{4}{14}$ of the countries
Africa	The rest of the countries

The students will use bristol board.

Triangles of the same colour are also the same size.

Number of Triangles Obtained per Sheet of Cardboard

Type of Triangle	Number of Triangles per Sheet
Equilateral	2 triangles per sheet
Isosceles	8 triangles per sheet
Isosceles right	4 triangles per sheet
Scalene	3 triangles per sheet

The cardboard sheets sold at the local arts and crafts store are all the same size.

Is it really useful to know the type of cardboard?



The coloured sheets come in different packs at the store.

Cardboard Sheets	Available in Packs of
Blue	5, 10 or 25
Yellow	10, 25 or 100
Red	50 or 100
Green	5, 10 or 25

