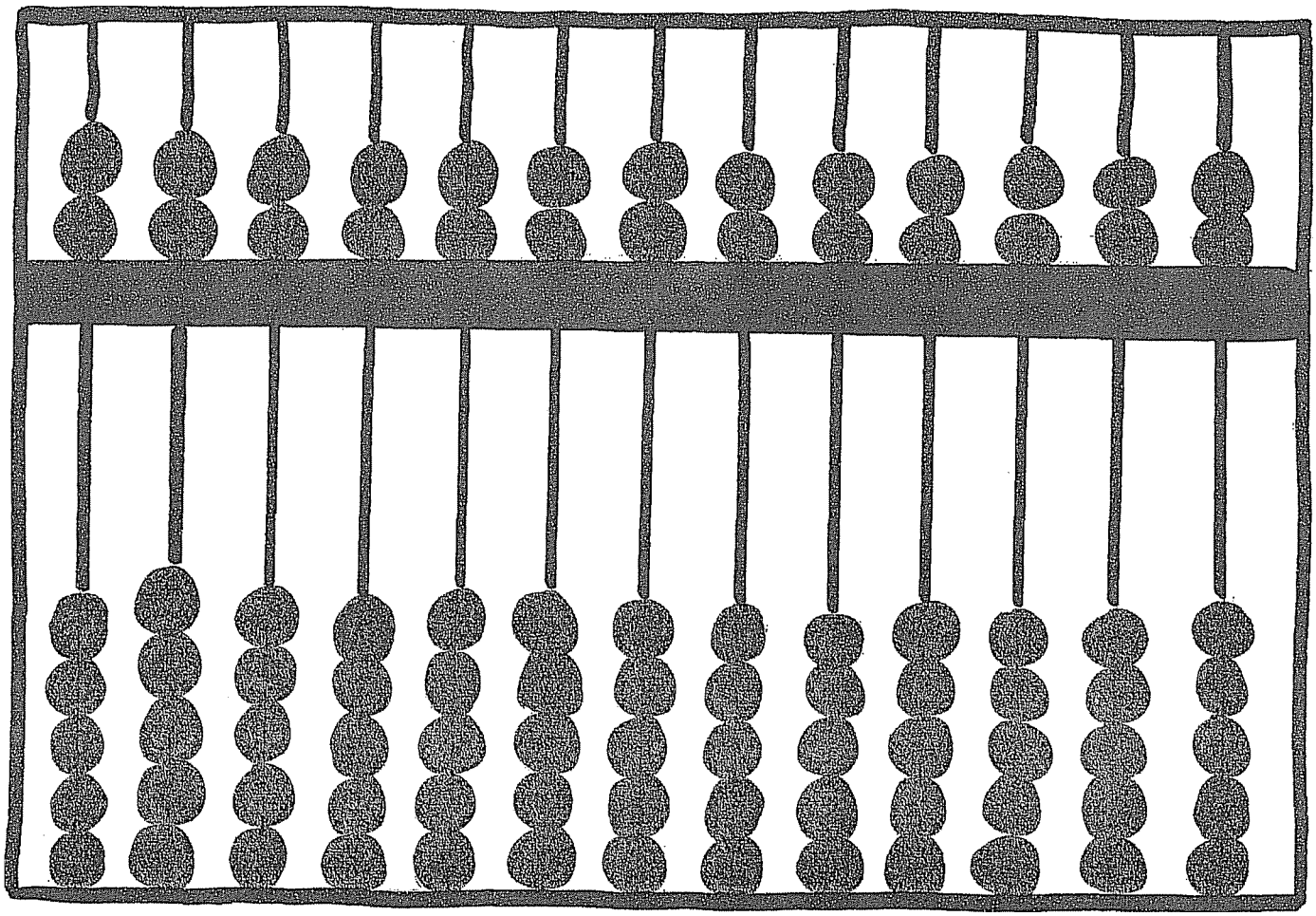
Abacus

An abacus is an instrument used to calculate math problems. It uses bead (numbers represented by beads) arithmetic. The use of the abacus is called the "art of reckoning". The abacus pictured below is one type, called the Chinese abacus.



Shoshanah Waxman
The Linden School
Toronto, Ontario

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Edited by Frances Schatz

During this past spring and summer I have collected some ideas to make September return to the classroom interesting for the primary and junior levels.

Be sure to involve your K-8 students in the **Design a Title Page** contest. Deadline is December 31, 1997. Interesting prizes will be awarded plus the winning entry is the title page starting in March 1998.

OAME's conference **The Name of the Game** in Toronto was a fascinating potpourri of activities created by students, parents,teachers and leaders in education. I have chosen one to highlight in this issue; it is difficult to choose one when there is so much choice.

Rick Newell, Unionville, Ontario is the creator of **ReadyOrNot**, a board game that is popular for Family Math nights, parent-friendly for homework activity, and available on the Web.This board game is played with tiles which have numbers on them and deals with arithmetic patterns at various playing levels. In this issue you are invited to participate in the Tournament offered by **Cottage Games**.The activity page, **ReadyOrNot Puzzle**, is intended for the primary level. Thank you Rick Newell for addressing the need to make mental math fun.

Just recently a neighbourhood child answered my question 'how was school today?' with the response "Bicycle numbers are a lot of fun." It didn't take me long to find the source of this child's joy. **Ilsedore Kautsky**, Prueter Public School, Kitchener shared her bicycle wheel math facts with me.You will find two sets of wheels for this grade 1-2 number sense strand that will help children learn computation in a cooperative way. Thank you Ilsedore Kautsky for this imaginative way to present number facts.

Carolyn Hill and **Ilse Nel**, students of the Faculty of Education, University of Western Ontario, have devised an activity that will make grade 2-3 children hungry for fractions.The sequential nature of the **Icing Our Cakes** activity helps the child understand the concept of a fraction.This one could be expanded to other fraction parts for higher grades.- Now I am going to the kitchen to make a Strawberry cake with Marshmallow icing and I'm going to eat one-quarter of it myself and share the other three-quarters with my family. Thank you Carolyn Hill and Ilse Nelfor some delicious fractions.

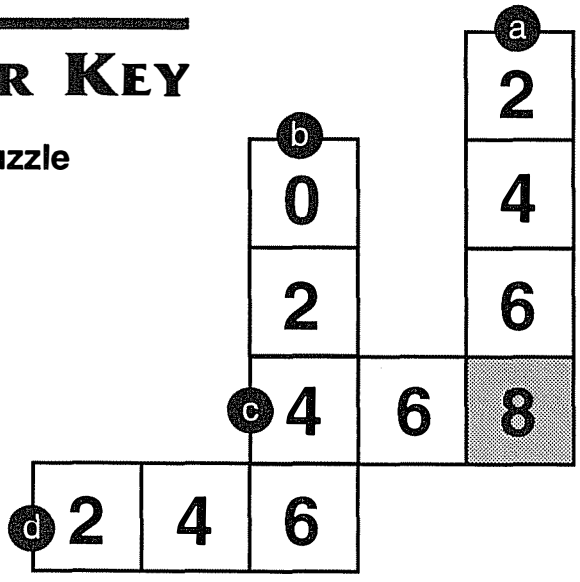
If you are interested in knowing more about books and activities available for K-8 through the **National Council of Teachers of Mathematics** please phone, fax, or write to me and I will be happy to provide specific information. OAME benefits from the sales of NCTM materials through me, the Ontario representative.

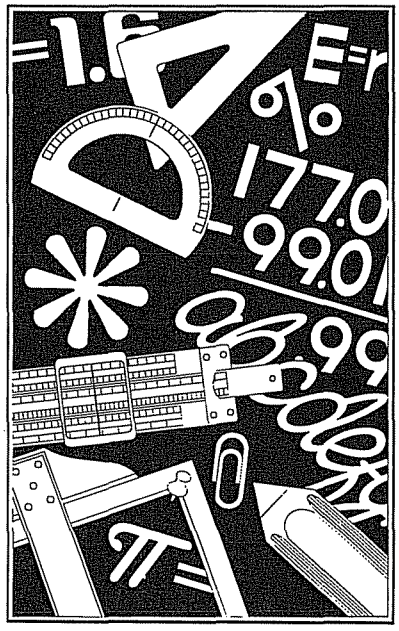
Hope this collection brings fun to your primary and junior students this fall. *Don't forget about the title page contest.*

Frances Schatz

ANSWER KEY

ReadyorNot Puzzle

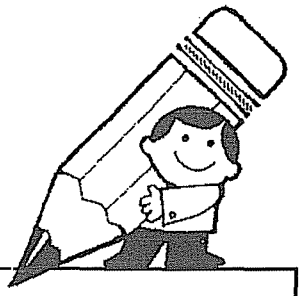




ABACUS CONTEST ENTRY FORM

Deadline: December 31, l997

Mail or Fax: Frances Schatz, Editor



On a separate piece of paper, design a title page for this journal *ABACUS.* Your design must include the word ABACUS, a picture to illustrate this word, and in 50 words or less answer the question: **What is an Abacus?**

Please include the following information.

Name _____ Teacher _____

School _____ Grade _____

Address _____ City _____

Telephone _____ Postal Code _____

WORLD WIDE NUMBERS

This contest makes effective use of electronic mail in concert with the Web Site. Play is built around the exciting numbers game which works on number patterns in a cross number format. Each pattern created must follow a single rule and any pattern will do, as long as you can explain the rule.

See page 8 for a sample classroom activity. This will give you an idea of what you can expect on e-mail. Join in the fun! Register your player(s) for the next tournament event using the form below.



Please include the following information.

Contact person _____

email address _____

School Address _____

City _____ Province ____ Postal Code _____

Grade _____

Require Facsimile Material: ☐ Yes ☐ No

Played **ReadyORNot** before: ☐ Yes ☐ No

I heard about this game via _____

To register On-Line **www.ontrac.on.ca/readyornot**

or Mail: Cottage Games

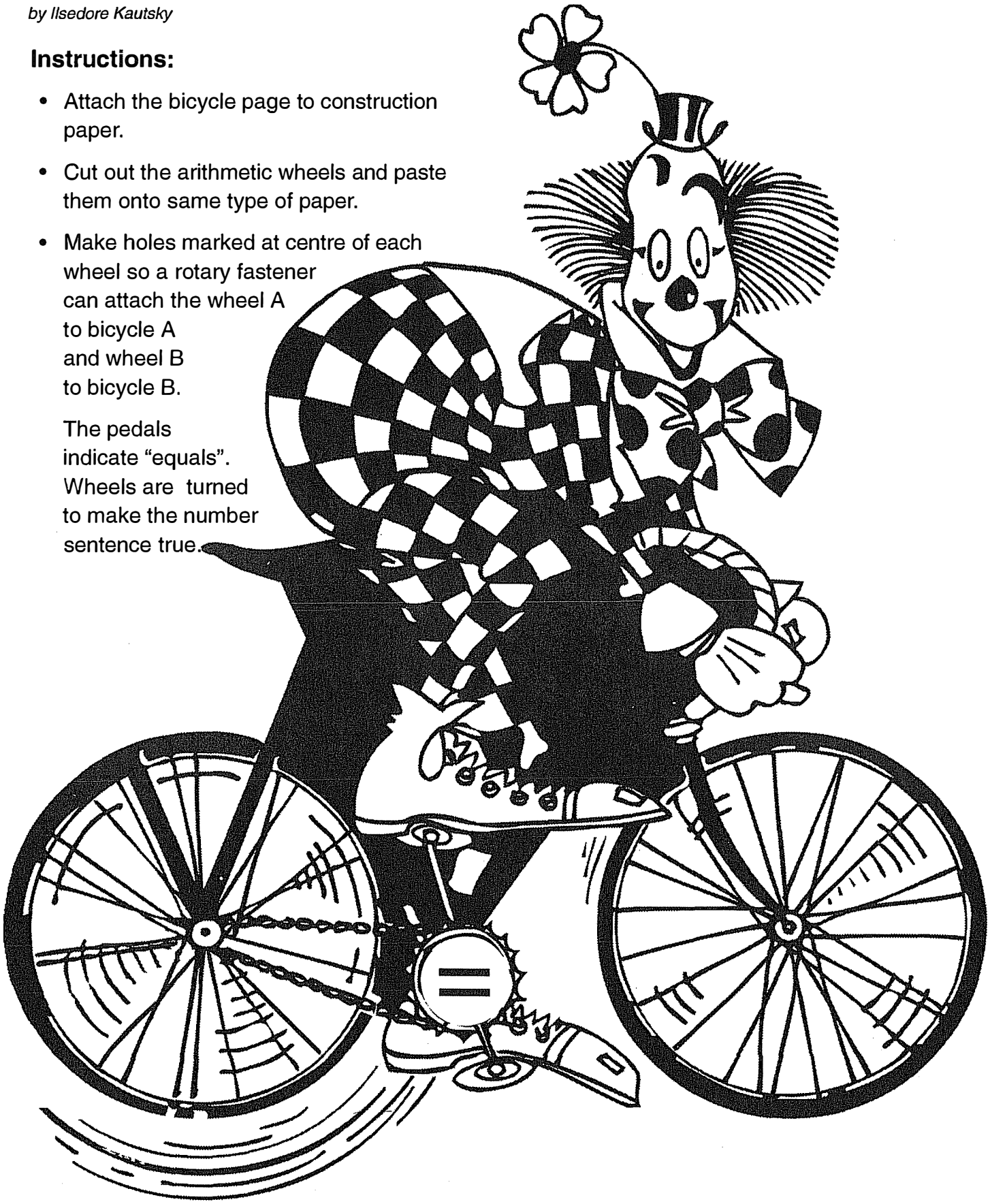
Math Facts Bicycle Wheel

by Ilsedore Kautsky

Instructions:

- Attach the bicycle page to construction paper.
- Cut out the arithmetic wheels and paste them onto same type of paper.
- Make holes marked at centre of each wheel so a rotary fastener can attach the wheel A to bicycle A and wheel B to bicycle B.

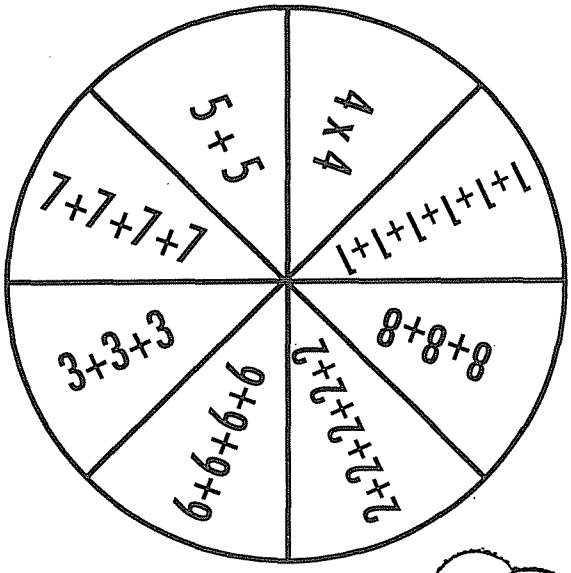
The pedals indicate "equals". Wheels are turned to make the number sentence true.



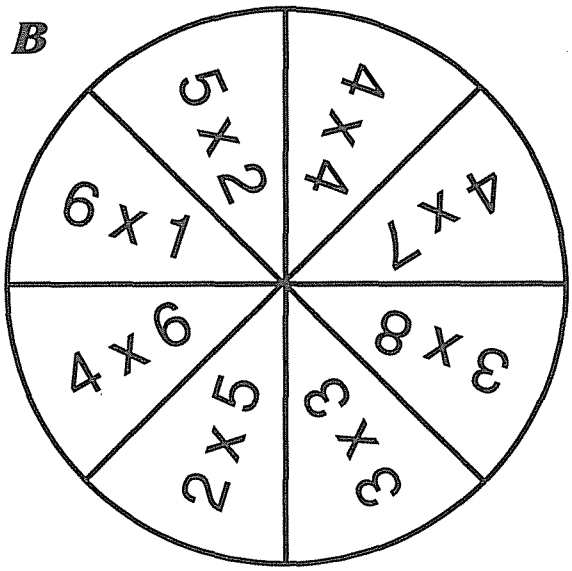
SET 2

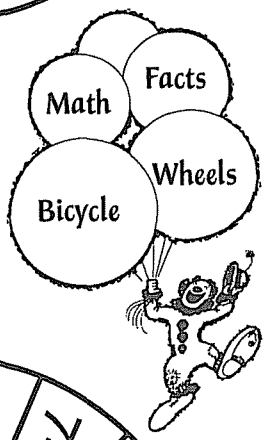


A



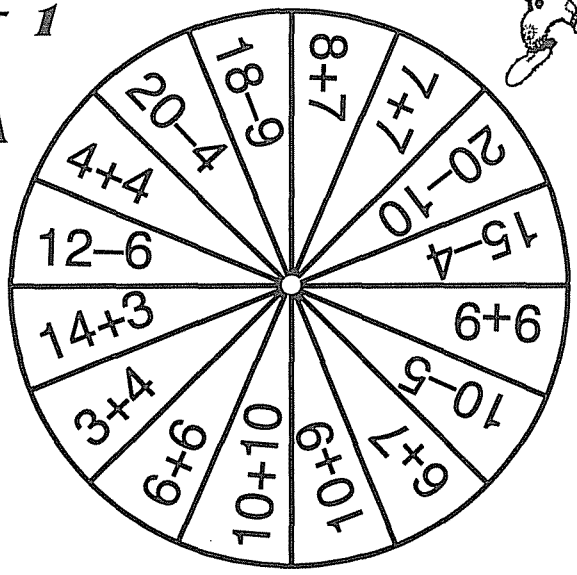
B



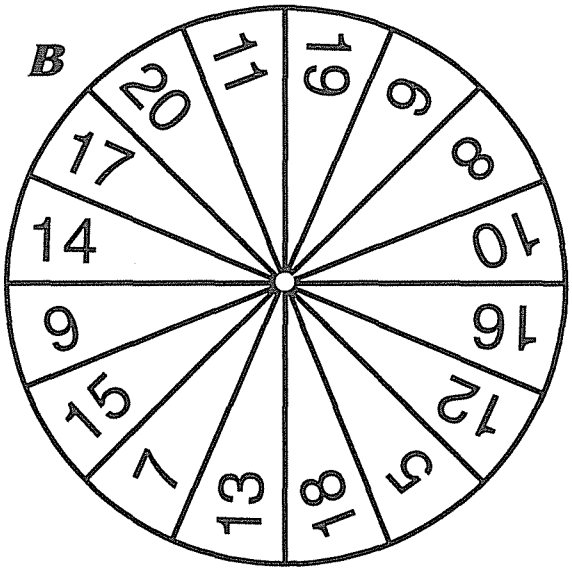


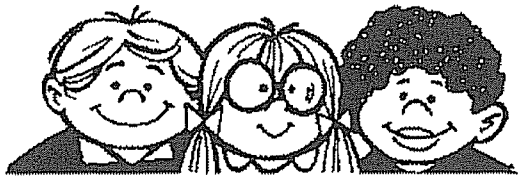
SET 1

A



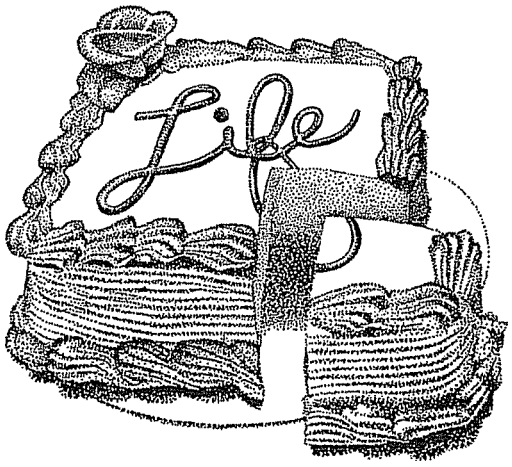
B





Icing Our Cakes

by Carolyn Hill and Ilse Nel



Activity: Fractions in Action

A region can be divided into equal parts of 2 or 4.

Materials:

- one "cake" for each of 3-5 players
- 25-30 pieces of "icing"
- Icing instruction cards

Steps:

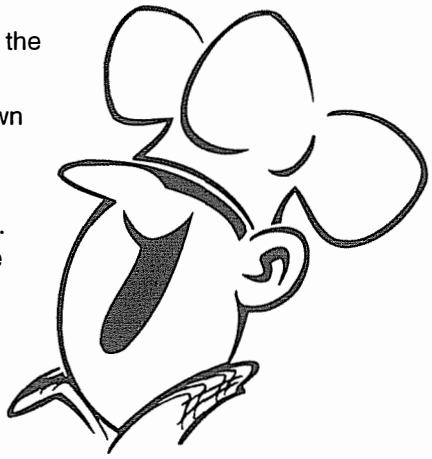
1. Make "icing" by cutting out 25-30 cards that represent one quarter 1/4 icing.

Icing	Icing

2. Make icing instruction cards by cutting out

7 cards that say	Cover 1/4 of your cake with icing	**5** cards that say	Remove 1/4 of icing from your cake
2 cards that say	Cover 1/2 of your cake with icing	**1** card that says	Remove 1/2 of icing from your cake
2 cards that say	Cover 2/4 of your cake with icing	**1** card that says	Remove 2/4 of icing from your cake
1 card that says	Cover 3/4 of your cake with icing	**1** card that says	Remove 3/4 of icing from your cake

Game:



The object of the game is to completely cover one's cake with "icing" using **exactly** the right amount of icing.

The deck of **Icing Cards** is placed in the middle beside the shuffled pile of face down **Instruction Cards**. Players take turns picking a card and following the instructions.

If a 'remove icing' card is turned up and the player does not have enough icing on the cake to remove the stated amount player must remove whatever is on the cake. If a card instructs the player to add more icing than player has room for on the cake player must reject the card and miss a turn.

Game ends when cake is covered with icing. At end of game all players must describe what part of cake is iced and also name the portion that is not iced.

1. Fill in the diagram to show what part of your cake is iced.

2. Complete the sentences:

_____of my cake is iced.

_____of my cake is not iced.

My favourite kind of cake is _____

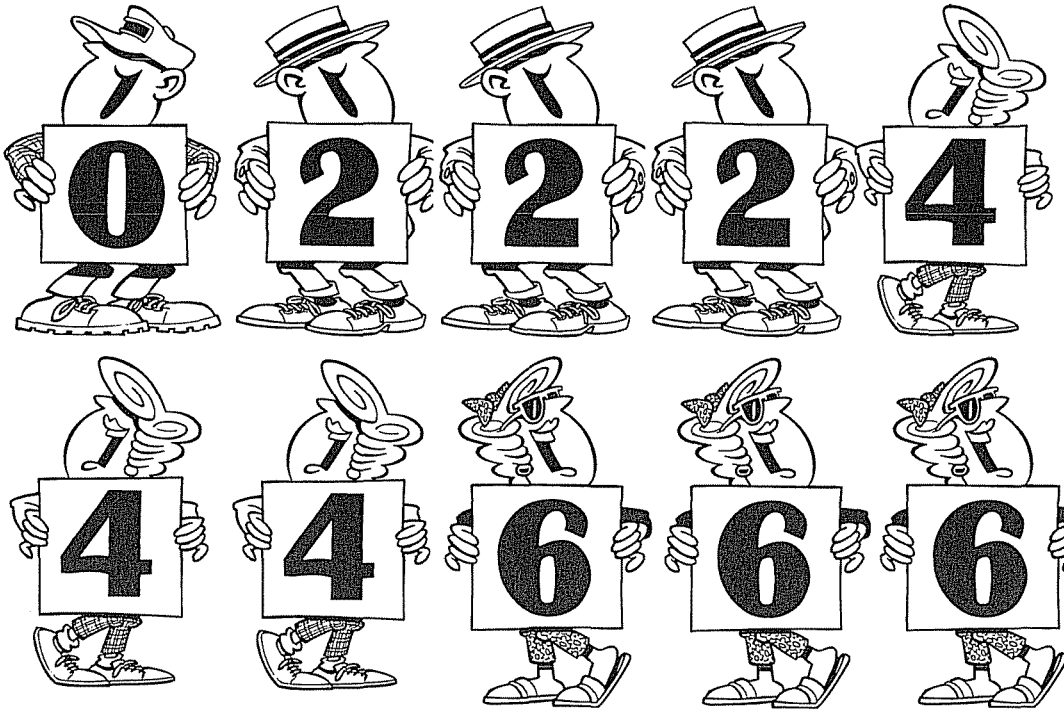
with _____ icing.

READYORNOT PUZZLE

Skills: addition to ten; number patterns

Level: primary

Equipment: Number tiles cutout from the following:



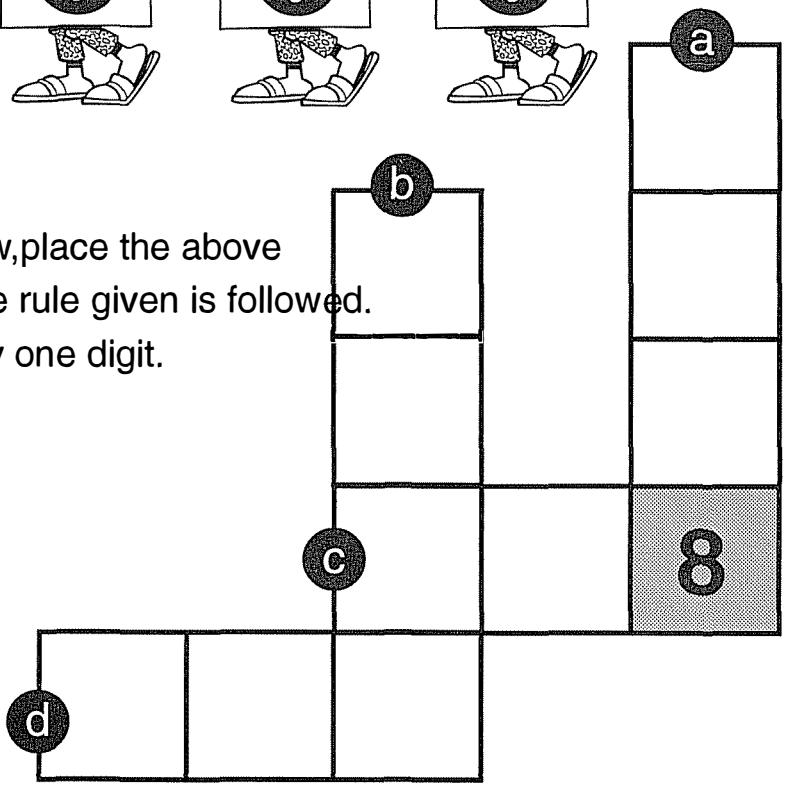
Start: On the grid given below,place the above number tiles so that the rule given is followed. Each box contains only one digit.

Down: a) Skip Counting; +2

b) Skip Counting; +2

Across: c) Skip Counting; +2

d) Skip Counting; +2



For other blackline master puzzles, consult:
Newell, Rick. Pattern Puzzle 30 Cross Number Puzzles. Cottage Games Canada Ltd. I997.