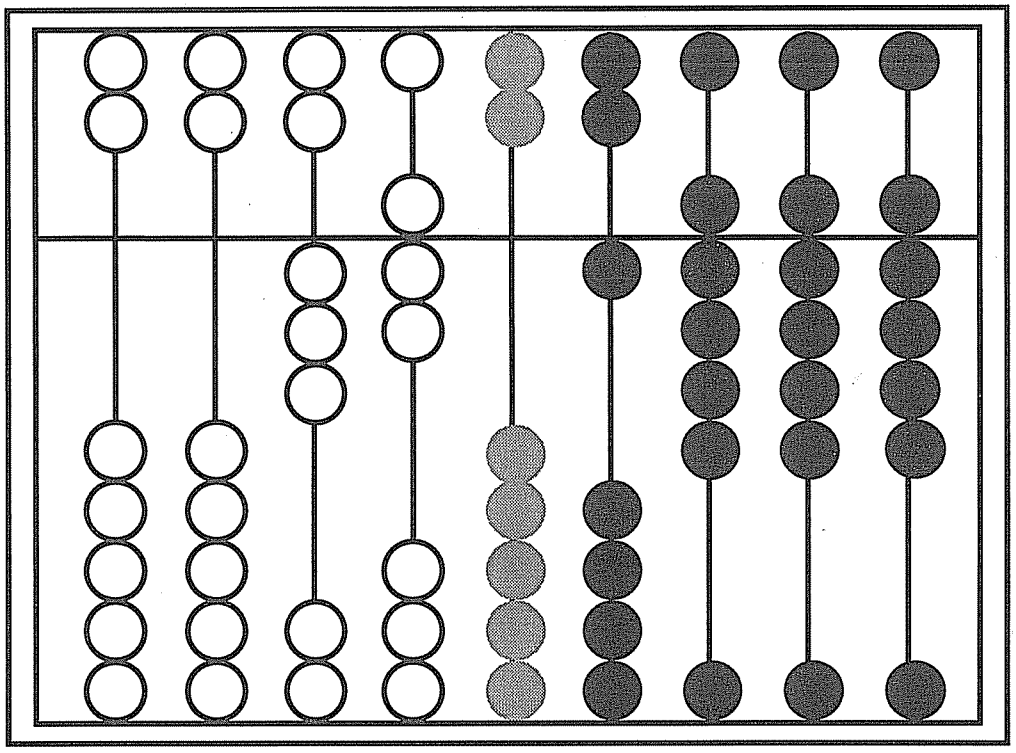
Abacus

Volume 37 1999



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From the Editor's Desk

During a recent meeting with elementary teacher colleagues, discussion featured homework expectations in K-9 mathematics classrooms. I was amazed by the variety of responses in regard to what homework should be expected. When I returned to my office I found that the new Ontario Curriculum Mathematics does address the role of parents.

The Ministry of Education and Training Guide indicates:

> *Studies show that students perform better in school if their parents (guardians) are involved in their education. Parents can provide encouragement at home for completing assignments and at the same time the family unit will gain an understanding about the importance of mathematics in daily living.*

In the rural grade 1-8 school I attended there was one teacher for an average of 40 students; no wonder my parents were so involved in my school program. I recall being expected to complete a workbook page during school and another one at home until grade 4. For each grade 5 to 8 we had an arithmetic textbook started at the beginning of the school year to be completed by June. Through this textbook my parents knew exactly what was the curriculum for the particular year and Mother was excellent in finding everyday examples for the various lessons. I remember many lessons about adding fractions using the various measuring utensils from baking. But times have changed. We have gone from pre-TV days to the age of Internet technology, from lots of spare time after school to availability of many organized activities, and from limited resources to a wide variety of books, games and technology to enhance learning. Even today's mathematics textbooks are large and awkward to carry and contain too much material to be covered in one year.

Technology is amazing. This issue of *ABACUS* is the first project on my new laptop computer and what an interesting challenge this is. Click here, drag there, open this, close that and a goggly-eyed paperclip answers all my queries. For a break I went shopping at a new bookstore just opened in our area. At that store I went to the mathematics section to scan for new titles and I purchased '*Why do Buses Come in Threes'* by Rob Eastaway and Jeremy Wyndham (Robson Books, Great Britain, 1998). The cover shows toy buses and numbers in a colourful pattern and it makes you want to look inside. I also added *'More Rapid Math Tricks and Tips'* by Edward Julius (John Wiley, United States, 1996) to my library. I am all set for resources to put this issue together. The starting point for this series of Homework lessons for a week was contributed by **Peter Banks** and **Kim Viveiros**, grade 4 and 5 teachers at Dickson Public School, Cambridge, Ontario. Thank you Peter and Kim for excellent activities that use home and school resources to improve students' mathematical skills.

Answer Key - Number Puzzle

1. 9	2. 1	■	3. 4	4. 9	■	5. 3	6. 6
■	7. 2	8. 8	■	9. 1	10. 5	■	4
11. 4	■	12. 1	13. 8	■	6	■	■
14. 5	4	■	8	■	■	15. 1	16. 9
0	■	■	17. 8	18. 4	■	■	5
■	19. 1	20. 8	■	21. 8	22. 5	0	■
23. 1	■	24. 1	25. 4	■	0	■	26. 4
27. 4	5	■	28. 2	7	■	29. 3	5

The strand *'Number Sense and Numeration'* for grade 4-5 has overall expectation that students will develop proficiency in mental computation and the specific expectation re computation is to recall multiplication and division facts to 81 (grade 4) and 144 (grade 5) in a meaningful context.

Mystery Reader Prize. If you are OAME member number 12419 please fax or write to the editor for a mathematical prize valued at $25.00. If this is not your number watch future issues and your number may appear.

Frances Schatz

Letter to the Editor

I am surprised that you would include Imperial measurements in the recipes of the December 1998 edition of the *Gazette, Abacus* section.

When teaching in the classroom I taught myself to bake and cook using Metric measurements and then was able to conduct my classes using only Metric measurements. We must show example for our students.

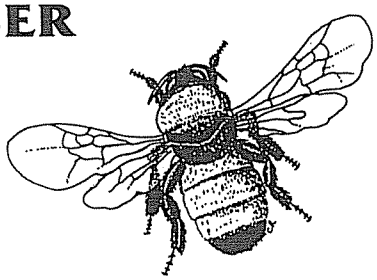
Mary Storey

Response from Abacus *Editor*

As editor I did consider the fact that the recipes were in Imperial: however, I have reason for leaving them in that measurement.

1. Author Kim Viviros teaches both imperial and metric, but imperial measures lend themselves better to a lesson on fractions. In my teaching I also use the 1/4, 1/3, 1/2, 1 cup, 1 tsp, 1/2 tsp, etc for practical hands-on with fractions.
2. In the real home world, metric is still not the choice of recipe books and measuring devices. Even in sewing and knitting I have to be able to work in inches-yards or centimetres-metres.
3. Textbooks are all metric - the *Abacus* needs to provide some examples from the real world.

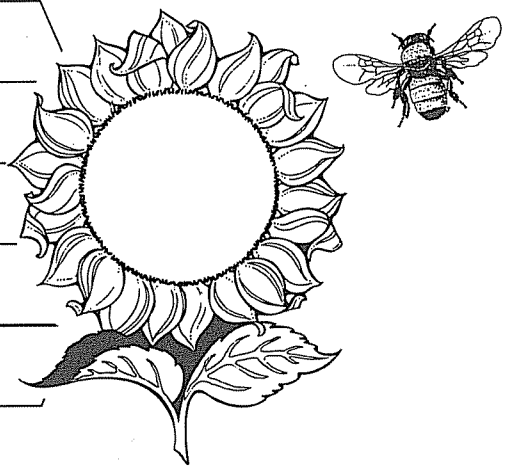
Discover Your Secret Number



1. Complete the following patterns:

0x0 =	1x0 =	2x0 =	
4x0=			
8x0=			
0x1 =	1x1 =	2x1 =	
4x1 =			
8x1 =			
0x2 =	1x2 =	2x2 =	
4x2 =			
8x2 =			





2. Replace each ☐ with an appropriate number.

11 + 7 = ☐	10 x 2 = ☐	15 ÷ 3 = ☐	7 + 7 = ☐	18 ÷ 2 = ☐	14 + ☐ = 28
24 ÷ 3 = ☐	15 - ☐ = 7	7 + ☐ = 10	3 x ☐ = 12	11 + 4 = ☐	9 + 8 = ☐
7 ÷ 1 = ☐	15 + 7 = ☐	6 ÷ 2 = ☐	12 ÷ 6 = ☐	☐ + 9 = 34	6 x 8 = ☐

3. The total of my ☐ numbers in #2 is _____.

4. Do you like adding and subtracting with ten?

Examples:

18 + 34	53 - 26	55 − 35
= 20 − 2 + 30 + 4	= 50 + 3 − 20 − 6	= 50 + 5 − 30 − 5
= 20 + 30 + 4 − 2	= 50 − 20 + 3 − 10 + 4	= 50 − 30 + 5 − 5
= 50 + 2	= 50 − 20 − 10 + 7	= 20 + 0
= 52	= 27	= 20

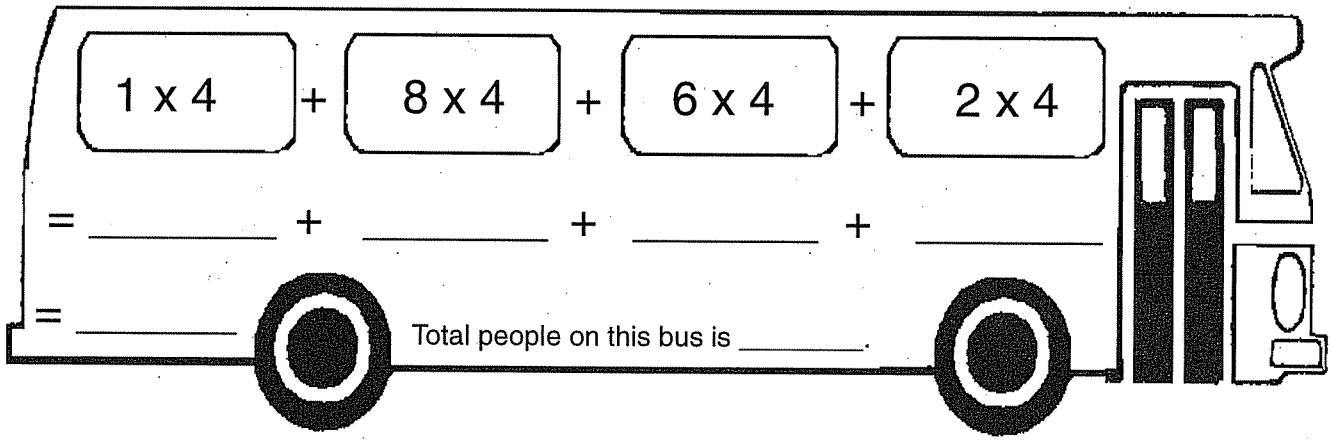
Create your own number problem and write your calculation.

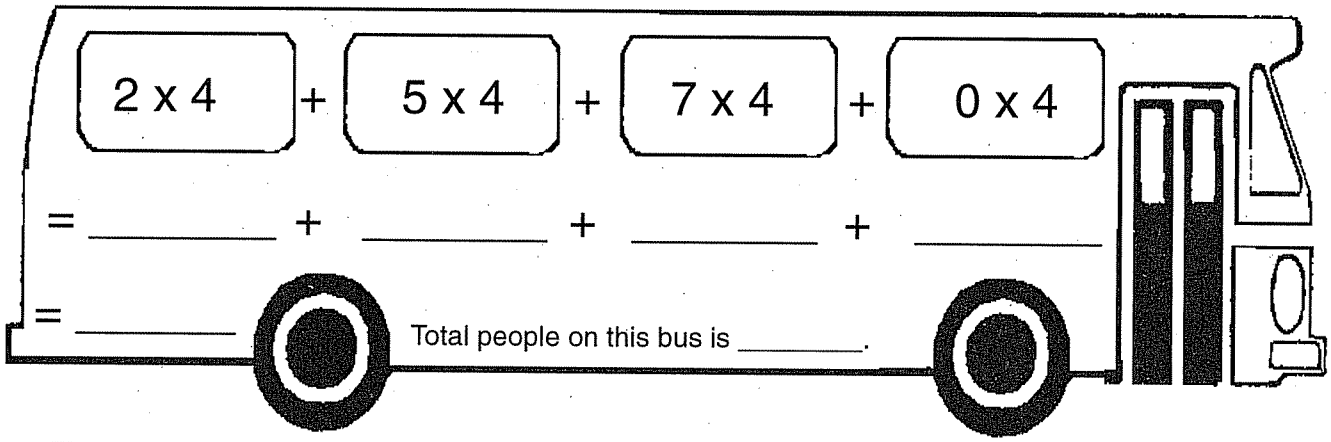
5. Your secret number is the difference between your answers in #3 and #4.

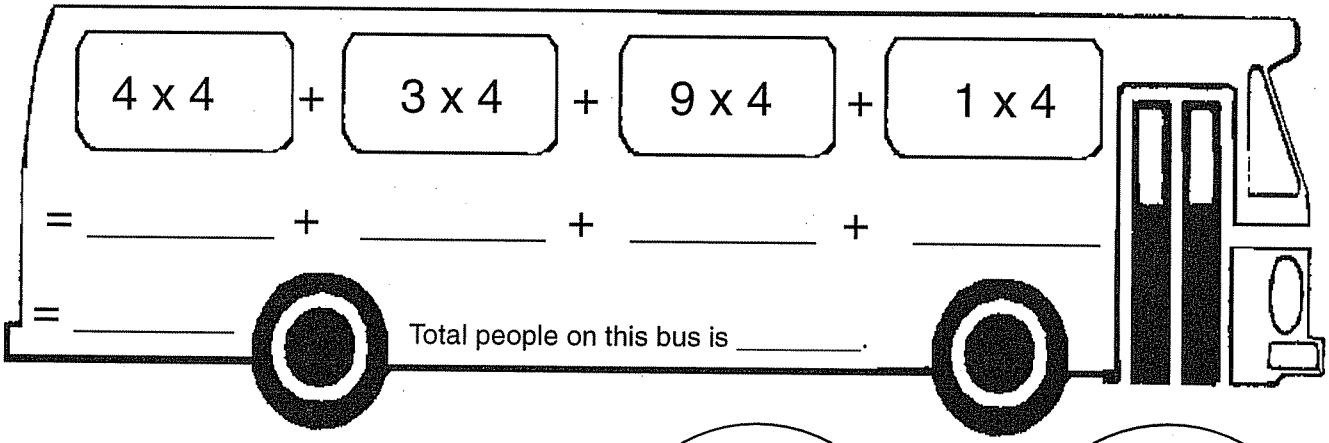
6. What is your favourite number? Where do you hear or see your favourite number? Write a journal note about why your favourite number could also be your secret number?

Counting Buses by Threes

1. Complete the pattern 3, 6, 9, 12, ____ ____ ____ ____ ____ ____ ____ ____



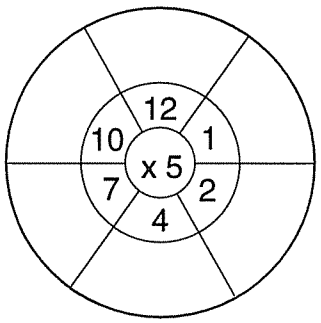


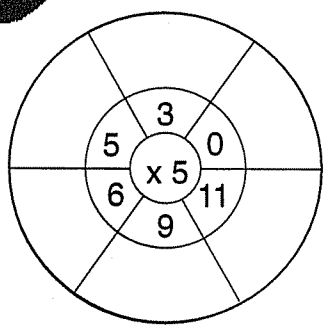


5. What is the total number of children riding on all three buses ?

_____

6. These bus wheels need to be finished. Put the number answer in the space.





The Magic of Numbers Puzzle

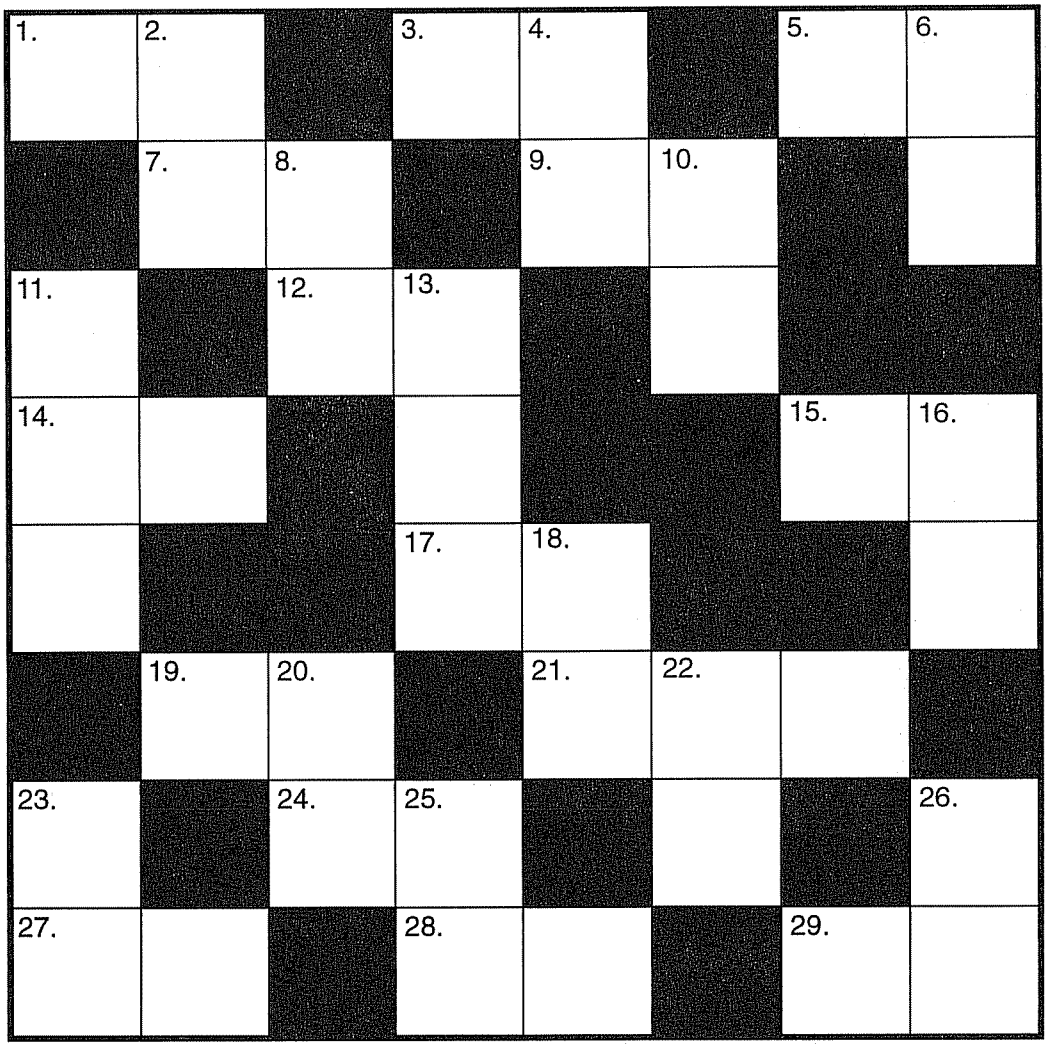
Complete the following chart:

0 x 6 = ☐	0 x 7 = ☐	0 x 8 = ☐
1 x 6 = ☐	1 x 7 = ☐	1 x 8 = ☐
2 x 6 = ☐	2 x 7 = ☐	2 x 8 = ☐
3 x 6 = ☐	3 x 7 = ☐	3 x 8 = ☐
4 x 6 = ☐	4 x 7 = ☐	4 x 8 = ☐
5 x 6 = ☐	5 x 7 = ☐	5 x 8 = ☐
6 x 6 = ☐	6 x 7 = ☐	6 x 8 = ☐
7 x 6 = ☐	7 x 7 = ☐	7 x 8 = ☐
8 x 6 = ☐	8 x 7 = ☐	8 x 8 = ☐
9 x 6 = ☐	9 x 7 = ☐	9 x 8 = ☐
10 x 6 = ☐	10 x 7 = ☐	10 x 8 = ☐
11 x 6 = ☐	11 x 7 = ☐	11 x 8 = ☐

Puzzle Clues

Across

1. $98 - 7 =$ ☐
3. $7 \times 7 =$ ☐
5. $4 \times 9 =$ ☐
7. $7 \times 4 =$ ☐
9. $3 \times 5 =$ ☐
12. $6 \times 3 =$ ☐
14. $9 \times 6 =$ ☐
15. $25 - 6 =$ ☐
17. $7 \times 12 =$ ☐
19. $25 - 5 - 2 =$ ☐
21. $350 + 500 =$ ☐
24. $7 \times 2 =$ ☐
27. $32 + 3 + 10 =$ ☐
28. $9 \times 3 =$ ☐
29. $7 \times 5 =$ ☐



Down

2. $1 +$ ☐ $= 13$
4. $81 + 10 =$ ☐
6. $8 \times 8 =$ ☐
8. $9 \times 9 =$ ☐
10. $7 \times 8 =$ ☐
11. $420 + 30 =$ ☐
13. $111 \times 8 =$ ☐
16. $100 - 5 =$ ☐
18. $6 \times 8 =$ ☐
20. $10 \times 8 + 1 =$ ☐
22. $100 -$ ☐ $= 50$
23. $6 + 8 =$ ☐
25. $6 \times 7 =$ ☐
26. $9 \times 5 =$ ☐



Garden Seeds

Garden seeds come in packets of seeds. *Abacus* Gardens has made it possible to purchase seeds in any package size. Complete the chart to determine the price of seeds for each packet.

Number of Seeds	TOMATO each 9 cents	CORN 10 cents each	PUMPKIN 11 cents each
0	0 x 9 =	0 x 10 =	0 x 11 =
1	1 x 9 =		
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			



Fill the empty seed packets as indicated.

Find the total for each one.



Peas	Beans	Peppers
80 – 10 =	50 – 20 =	70 – 30 =
3 x 6 =	4 x 6 =	6 x 4 =
12 ÷ 2 = ____	14 ÷ 7 = ____	24 ÷ 6 = ____
Total	Total	Total

Onions	Beets	Cucumbers
4 x 4 =	9 x 3 =	8 + 8 =
6 x 6 =	100 – 10 =	9 x 8 =
10 – 5 = ____	4 + 9 = ____	36 ÷ 4 = ____
Total	Total	Total

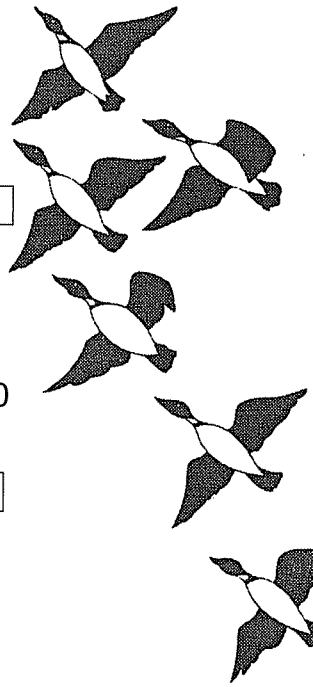
Weather for the Ducks

All ducks like to be near or in water. Help each duck have fun on this sunny day. If you give each duck the number requested you will make the duck happy.

This mother duck is sitting on a nest of $5 \times 3 = \square$ eggs.



It will take four weeks for these eggs to hatch,
so Mother Duck has to sit on the nest for $\square \times \square = \square$ days.



$8 \times 4 = \square$

$36 \div 4 = \square$

$5 \times 6 = \square$

$7 + \square = 10$

$21 + 4 = \square$

$7 + \square = 16$

$3 \times 8 = \square$

$4 + 7 = \square$

$100 + 100 = \square$

$4 \times 6 = \square$

$8 + \square = 12$

$5 + 50 = \square$

$12 \times 0 = \square$

$3 \times 7 = \square$

$\square + \square = 30$

$\square + \square = 25$

$\square - \square = 20$

$3 \times 9 = \square$

$5 \times \square = 45$

$40 - 3 = \square$

$6 \times 8 = \square$

$9 \times 9 = \square$

$100 - 30 = \square$

$50 - 5 = \square$

$30 - 20 = \square$

$7 \times 5 = \square$

$8 \times 8 = \square$

$30 \div 6 = \square$

$16 \div 4 = \square$

$12 \div 3 = \square$

$28 \div 4 = \square$

$18 - 10 = \square$

$3 \times 4 = \square$

$9 + 9 = \square$

$10 \times 3 = \square$

$25 - \square = 10$

