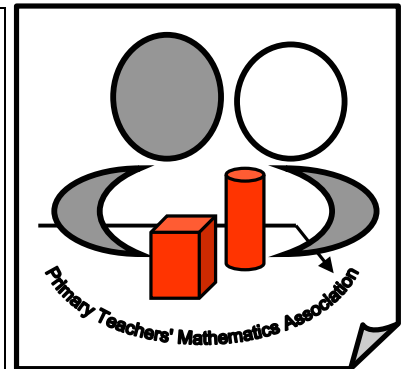


PRIMARY TEACHERS' MATHEMATICS  
ASSOCIATION

# NEWSLETTER

February 2002



## NEW IRISH PRIMARY SCHOOL MATHS ASSOCIATION

Hello and welcome!

This is the first newsletter from the Primary Teachers' Maths Association (PTMA). The Association was set up at the end of 2000 following a meeting of interested educators. It receives financial support from the In-Career Development Unit of the Department of Education and Science under the National Development Plan.

The goals of the association are:

- To support and promote quality teaching of mathematics in Irish primary schools in general and
- To offer support to teachers in implementing the revised curriculum for mathematics in primary classrooms.

During 2001 monthly workshops for primary teachers were organised on a variety of maths topics. The workshops are continuing this year. This newsletter complements the workshops and provides details of upcoming events and activities. The newsletter may be photocopied for distribution to colleagues. Your feedback on the newsletter is very important to us. Its future will depend on your response to this issue. If the newsletter continues it will be sent to all members. Becoming a member of the Association has many benefits. Members receive details of the monthly workshops by e-mail, the admission fee to monthly workshops is cheaper for members and the membership fee includes attendance (with lunch) at the first annual conference, which will be held in October 2002. You can become a member by completing the form below.

The members of the committee are Seán Delaney (Chairperson), Patsy Stafford (Secretary), Therese Dooley (Treasurer), Seán Close, Averil Courtney, Bernadette Dwyer, June Hosford, Helen McNally, Noreen O'Loughlin and Maurice O'Reilly.

You can contact us by e-mail at [primarymaths@ireland.com](mailto:primarymaths@ireland.com) or by phone at 01 805 7730. The Association is in the process of setting up a website. The address for the website is: [www.primarymaths.ie](http://www.primarymaths.ie).

## DATES FOR YOUR DIARY

### Monthly Workshops

DATE	VENUE	TIME	TOPIC	FEE
Wednesday, February 6 <sup>th</sup>	St. Patrick's College, Drumcondra	8pm-10pm	Activities for the 100 <sup>th</sup> Day of School	€4 (€2 for members)
Wednesday, April 17 <sup>th</sup>	Coláiste Mhuire, Marino	8pm-10pm	Probability	€4 (€2 for members)
Wednesday, May 22 <sup>nd</sup>	Coláiste Mhuire, Marino	8pm-10pm	Maths Trails	€4 (€2 for members)

### First Annual Conference

<b>Date:</b>	Saturday, October 12 <sup>th</sup> 2002
<b>Guest Speaker:</b>	Eunice Pitt
<b>Other Activities:</b>	Practical workshops, 'make and take' sessions, maths trails and seminars.
<b>Venue:</b>	Coláiste Mhuire, Marino
<b>Fee:</b>	Included in membership fee of PTMA (€15)
<b>Further Details:</b>	The full programme will be available on the website from June 2002. Details also available at the workshops.

Cut along the dotted line.....

### MEMBERSHIP APPLICATION FORM

I wish to become a member of the Primary Teachers Maths Association for 2002.

Name (Block letters): \_\_\_\_\_ Signature: \_\_\_\_\_

School Name and Address: \_\_\_\_\_

E-Mail: \_\_\_\_\_ Phone: (s) \_\_\_\_\_ (h) \_\_\_\_\_

Class taught or category of teacher (e.g. learning support, resource) \_\_\_\_\_

Please include a cheque for €15 payable to the Primary Teachers Maths Association and return the form to Therese Dooley, c/o, St. Patrick's College, Drumcondra, Dublin 9.

### 100<sup>TH</sup> DAY OF SCHOOL

Children all over the country have been busy since September counting up to the 100<sup>th</sup> Day of School for the 2001 –2002 school year. In most cases this day falls during the week beginning February 4<sup>th</sup>, 2002. Here are some fun ideas to help you celebrate with your class on the hundredth day itself:

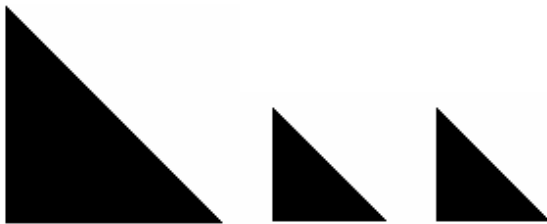
- Share 100 snack items with your class
- Measure 100 footsteps from your classroom or 100 metres from the school door.
- Write about how you would spend €100.
- See how many times you can write **one hundred** in 100 seconds.
- Do activities on your hundred square.

- Show €1 using as many different combinations of coins as possible.
- Measure things around the school that are exactly 100cm long.
- Predict how many times you would have to throw 2 dice to get to 100. Use 2 dice and your hundred square to check your prediction
- Write as many equations as possible that equal 100 ( $90 + 10 = 100$ ,  $200 - 100 = 100$ ,  $20 \times 5 = 100$ )
- Make collections of 100 items
- List 100 adjectives or adverbs.
- Write about what you think life will be like in 100 years.
- In 100 seconds predict and find out how many times you can jump, hop etc.
- Ask pupils to close their eyes and to raise their hands when they think 100 seconds has elapsed.

For more ideas come to our February workshop!

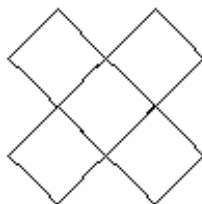
### PUZZLE TIME FOR JUNIOR CLASSES

Photocopy and cut out the following shapes. How many geometric shapes can you make by combining the shapes?



### PUZZLE TIME FOR MIDDLE AND SENIOR CLASSES

- (1) Can you arrange 5 different digits (from 0-9) in the cross below so that:
- the total of the 4 outside numbers is equal to the middle number
  - the top 2 numbers multiplied together are also equal to the middle number
  - the sum of the 3 numbers forming a diagonal is equal to the other 3 numbers forming the other diagonal?



- (2) 142857 is an interesting number. Can you find out interesting facts about it by multiplying it by 2, 3 etc.

### COMPETITION: THE TOMATO AND THE BEAN

To coincide with the first issue of the Primary Teachers' Maths Association newsletter we have a special competition, which is open to all primary school classes. You can win a gift token worth €60 sponsored by Carrolls Educational Supplies to spend on maths equipment or a selection of children's books donated by Easons. To be in with a chance

of winning these prizes you need to answer the question below and e-mail your answer to [primarymaths@ireland.com](mailto:primarymaths@ireland.com) writing 'Competition' in the subject line. You need to include your class, your teacher's name, the name of the school, the school phone number and your e-mail address. The closing date for the competition is March 15<sup>th</sup> 2002. All correct entries will be placed in a 'hat' and the prizes will be sent to the first two entries out of the hat. Here is the problem:

Tom's Dad sowed some tomato seed in February. He gave Tom one of the tomato plants in a pot. At the beginning of May Tom put his tomato plant outside. On the same day he sowed a bean in another pot. Ten days later the bean plant was just 1 cm (centimetre) above the soil surface. Tom measured his tomato plant, which was already 38 cm tall. Each evening Tom measured his two plants. On the next evening the little bean plant had grown another 2cm so it was 3cm high. Each day it continued to grow twice the amount it had grown the day before. The tomato plant grew at a steady 5 cm a day. After how many days were the two plants the same height when Tom measured them in the evening? How high were they?



Source: <http://nrich.maths.org/primary>

## TEACHING MATHEMATICS THROUGH HURLING, FOOTBALL AND CAMOGIE

By Seán Delaney

In a recent article in the *Sunday Tribune* (December 23<sup>rd</sup> 2001) Joe Lee wrote that sport is too important in our lives to be left to the sports pages of newspapers. He went on to say that "the first maths that many can see as relevant is being able to read league tables. It's amazing how [children's] arithmetic can improve when they want to follow the fortunes of their team." I have been aware for some time now that this is indeed true and that our own Gaelic games offer many opportunities for children to practise their maths. Here are some suggestions for integrating maths with Gaelic games in senior classes in the primary school. I have matched the suggestions with objectives from the Revised Primary Maths Curriculum.

## NUMBER

1. If the final score in a match is Galway 1-9 and Kerry 0-15, who won the game? By how much did they win?

(Obj.: Solve word problems involving addition and subtraction, 3&4)

2. Here are the seating capacity figures for some of our well known GAA stadia:

Stadium	Seating Capacity
Nowlan Park, Kilkenny	30,000
Croke Park, Dublin	80,000
Páirc Uí Chaoimh, Cork	43,500
Semple Stadium, Thurles	55,000
St Tiernach's Park, Clones	33,000
St. Jarlath's Stadium, Tuam	25,000
McHale Park, Castlebar	34,000
Gaelic Grounds, Limerick	32,000

(a) Write out these venues in order of seating capacity starting with the stadium with the highest capacity. Read out your list for the boy or girl sitting beside you and see if they are the same.

(b) At a recent match in Nowlan Park, in Kilkenny, the stadium was filled to  $\frac{2}{3}$  of its capacity. How many spectators were present?

(c) If Páirc Uí Chaoimh was filled to 50% of its seating capacity how many spectators would there be?

(d) Write a number that is between the seating capacities of Clones and Castlebar stadia.

(e) In a recent game Croke Park was filled with adults and children in the ratio of 4 to 1. How many children were present?

(f) For the same game, if tickets cost €19 for adults and if children were admitted free how much money was collected on the gate?

(Obj.: Solve problems involving operations with whole numbers, fractions, decimals and simple percentages, 5 & 6; Read, write and order whole numbers, 5 & 6; understand and use simple ratios, 6)

## ALGEBRA

3. In most Gaelic games each player tries to 'mark' the corresponding player during a game. E.g. a full back marks a full forward. If every player marks their corresponding players and if each player is wearing the correct jersey, what will be the sum of the numbers on each pair's jerseys?

(Obj.: Solve one-step number sentences and equations, 5 & 6)

## SHAPE AND SPACE

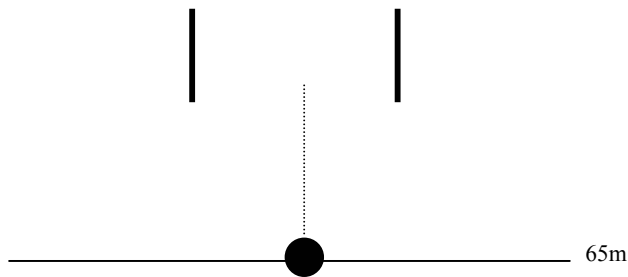
4. What shape is a gaelic games pitch?

(Obj.: Identify, describe and classify 2-D shapes, 3)

5. What shape is a football in Gaelic football? Why is this a suitable shape? Can you suggest a shape that would be unsuitable as a football?

(Obj.: Explore, describe and compare the properties of 3-D shapes, 3)





6. What word describes the line that is formed by the crossbar? What word describes the line that is formed by one goalpost?
7. How would you describe the relationship between the two goal posts?
8. How would you describe the relationship between the goal posts and the crossbar?  
(Obj.: Identify, describe and classify vertical, horizontal and parallel lines, 3; Identify, describe and classify oblique and perpendicular lines, 4)
9. What angles can you recognise in the goal posts?
10. The player at the black dot is going to take a 65 m puck. What kind of an angle will the line of the ball make with the goal?  
(Obj.: Recognise, classify and describe angles and relate angles to shape and the environment, 5)
11. Do the goal posts have line symmetry?
12. Name one other shape at a sports stadium that has line symmetry.  
(Obj.: Identify line symmetry in the environment, 3 & 4)

### MEASURES

13. If the dimensions of a Gaelic games pitch are 137 m long and 82 m wide, what is the area of the pitch? What is the perimeter?
14. What are the dimensions of your school pitch? Is its area larger or smaller than the pitch described above?  
(Obj.: Estimate, compare and measure the area of regular and irregular shapes, 4; Estimate, compare, measure and record lengths of a wide variety of objects using appropriate metric units and selecting suitable instruments of measurement, 3 & 4)
15. Hold a sliotar. Estimate what it weighs in grams. Check your estimate. The rules specify that it should weigh between 100g and 300g. Does this sliotar meet the requirements of the rules? Name a sports ball that is heavier than/lighter than this.  
(Obj.: Estimate, compare, measure and record the weight of a wide variety of objects using appropriate metric units, 3)
16. A game consists of two halves of 35 minutes each and a 10 minute interval. If a game begins at 3:30pm, at what time should it end?
17. The centenary of the first public camogie match will occur in 2004. In what year was the first camogie match played? In what century was that?
18. The first hurling All-Ireland was the 1887 final. A hurling championship final took place every year since then, except in 1888. How many all-Ireland hurling finals have there been to date? Why was the final of the inter-county championships not held in 1888?  
(Obj.: Solve and complete practical tasks..involving times and dates and the addition and subtraction of hours and minutes, 4)

### DATA HANDLING

19. Check the details of the players in a newspaper prior to a big game. Compare the average age, height and/or weight of the players on two teams.  
(Obj.: Explore and calculate averages of simple data sets, 5 & 6)
20. Here are the statistics regarding the winners of the all-Ireland hurling finals:

Cork	(28)	Kilkenny	(26)	Tipperary	(25)	Limerick	(7)
Dublin	(6)	Wexford	(6)	Galway	(4)	Offaly	(4)
Clare	(3)	Waterford	(2)	Kerry	(1)	Laois	(1)
London	(1)						

(a) Display the information on a bar chart

(Obj.: Collect, organise and represent data using pictograms, block graphs and bar charts, 3)

*The use of a calculator is permitted for the following questions:*

(b) What fraction of the finals have been won by Cork? What is this as a percentage?

(c) What fraction of Irish counties (Republic) have never won an all-Ireland hurling final? What is this as a percentage?

(Obj.: Read and interpret tables, pictograms, block graphs and bar charts, 3)

(d) Given the above statistics which of these words: possible, impossible, might, certain, not sure, best describe the chances of the following teams winning this year's All-Ireland hurling final: Cork, Laois, Offaly, Kilkenny, Kerry, your county. (The answer to this will vary depending on the number of championship matches that have been played).

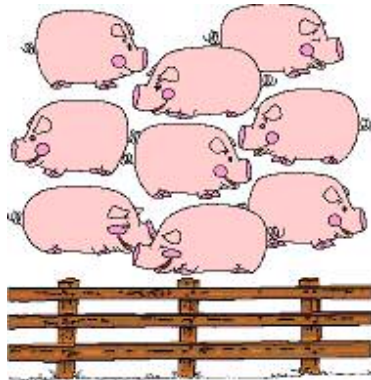
(Obj.: Use vocabulary of uncertainty and chance, 3 & 4)

These questions represent samples that can be adapted for classroom use according to the location of the school, the time of the year and the interests of the children. Newspaper reports of inter-county games, local games and attendance at inter-school matches can inspire additional questions or ways of adapting the suggestions given here. If you would like to suggest further items for inclusion in a later article or if you have any questions or comments regarding the items above, please write to me at: [sdelaney@mie.ie](mailto:sdelaney@mie.ie). In compiling these questions I consulted the *Primary School Curriculum: Mathematics* (1999) and two websites: [www.gaa.ie](http://www.gaa.ie) and [www.ireland.com](http://www.ireland.com) (gaa section). Answers to the questions are contained on the [www.primarymaths.ie](http://www.primarymaths.ie) website.

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### PUZZLE TIME FOR TEACHERS

A farmer has nine little pigs. He has four pig pens. He puts his nine little pigs into the four pens. Each pen has an odd number of little pigs in it. How does the farmer have the pens arranged? (Answers to all puzzles on [www.primarymaths.ie](http://www.primarymaths.ie))



Taken from: <http://www.period.com/puzzles/puzzle06/>