

▲ FROM THE EDITOR'S DESK

...numbers have neither substance nor meaning, nor qualities. They are nothing but marks, and all that is in them we have put into them by the simple rule of straight succession.

- Herman Weyl

In this issue of *The Abacus* we shall be introducing our readers to some of the rich mathematical tasks and investigations which can be found at the NRICH website. For those of you who have visited this site, you already know that they have a range of delightful problems that span the grades. The site has kindly granted us permission to use their problems, investigations and articles in this journal. We express our deep appreciation to them for their willingness to share their resources with us! We know that you will find the tasks to be both meaningful and worthwhile. Please let us know how your students react to these tasks. We would like to know how empowering the tasks are and some of the ways the students solve the assigned tasks. Please send us some of the students' work and we shall publish as many of them as we can. As we know, a rich problem can be solved in many different ways and students have a way of surprising us as they construct knowledge and meaning for themselves.

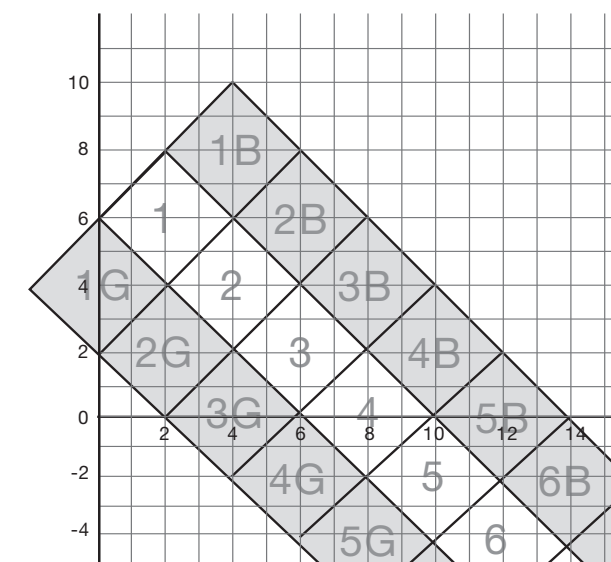
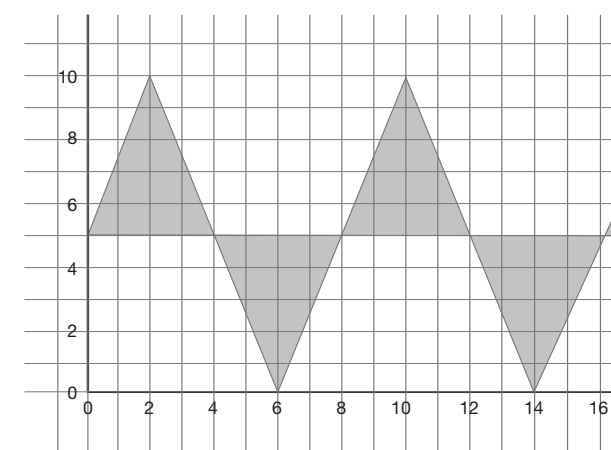
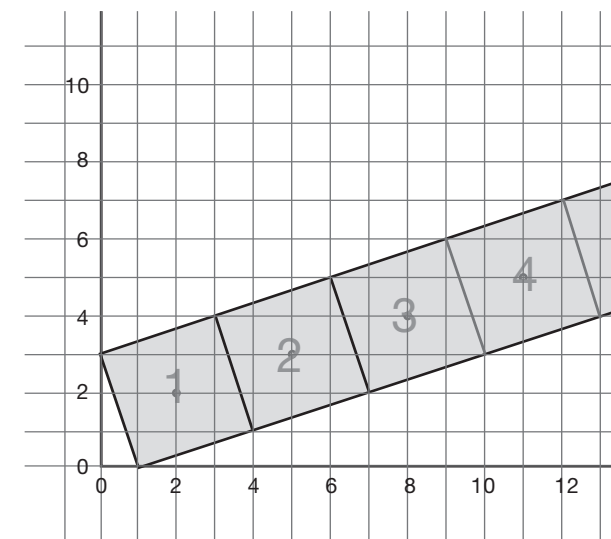
We would also like to receive some problems or investigations from you or from your students. We know that every day many amazing and imaginative lessons are 'taught', and that teachers are continually creating for their students tasks that are seldom shared with others. We would like to have a "Share Your Ideas" section in which we could show

case lesson tips, problems or insights gained from teaching a concept or lesson. It need not be a long article, just an idea or two will suffice.

We shall be starting some new columns in the next edition of *The Abacus*. Plans are under way to have articles written for each of the following sections: Mathematics and Literature, Concrete Materials Across the Grades and Technology Corner which will feature either *Geometer's Sketchpad*, Calculators or Tinkerplots. If there is another regular feature that you think we should include, please send your suggestions to us.

Looking forward to hearing from you!

▲ COORDINATE PATTERNS



Squares

What are the coordinates of the centre of the 20th square?

- What are the coordinates of the bottom left hand vertex of the 34th square?
- Imagine the sequence of squares extending to the left: $\dots -2, -1, 0, 1, 2, 3, \dots$
- What are the coordinates of the centre of the -15th square?
 - What strategies are you using to answer these questions?

Triangles

- What are the coordinates of the top vertex of the 23rd triangle?
- What are the coordinates of the top left hand vertex of the 58th triangle?
- What strategies are you using to answer these questions?

And more squares

- What are the coordinates of the centre of 22B?
- What are the coordinates of the left hand vertex of 26G?
- What strategies are you using to answer these questions?

SOURCE:NRICH (<http://nrich.maths.org>)