

Six Of The Best

Win a whole kilogramme
of Cadbury's Dairy Milk
Chocolate!

*This competition is
open to all children at
Highfield, but
assistance is invited
from all parents,
friends and relatives!*

*Answers to be submitted by
Sunday 3rd December 2000.*

*Full solutions will be posted
on the School Web Site*

*<http://www.highfieldschool.org.uk>
(Maths page) after that date.*

**The PRIZE of 1kg
Chocolate will be
awarded on
NUMBER DAY**

**(Tuesday 5th December)
to the child who submits
the most correct answers.
Tiebreak: Presentation!**

*SOTB Series 5 November 00
Stephen Froggatt*

1. I have three special four-sided dice. They have one letter on each side. When I roll them together I get three random letters which I try to rearrange into a word. In my eight goes so far I have made the words:

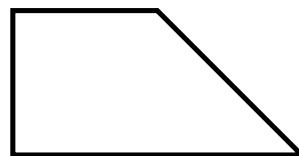
CAT, SON, POD, RIG, PEG, TAP, DIN, APE
What could be the letters on each dice?

2. In a boarding school there are fifteen schoolgirls who always take their daily walks in groups of three. How can it be arranged so that each schoolgirl walks in a group with two different companions every day for a week (7 days)?

3. Calculate $1\ 111\ 111\ 111 \times 9\ 999\ 999\ 999$

4. A pearl necklace has 33 pearls with the largest and most valuable in the middle. Starting from one end, each successive pearl is worth £100 more than the one before (up to the middle one), but starting from the other end each pearl is worth £150 more than the one before, up to the big pearl. The whole necklace is worth £65 000.
What is the value of the middle pearl?

5. The figure below represents two equal squares placed side by side. The second square has been cut in half diagonally:



The puzzle is to cut the figure into **four** identical pieces.

6. What is the missing number in Triangle Four?

