UNIVERSITY OF WATERLOO
Faculty of Mathematics
Waterloo, Ontario N2L 3G1

Centre for Education in
Mathematics and Computing

Grade 6 Math Circles
Abacus Solutions
February 13/14, 2013

1. What number is displayed on each abacus?

   (a) 8

   (b) 163

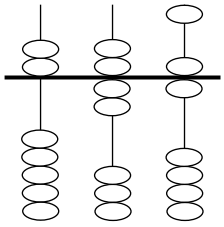
   (c) 905

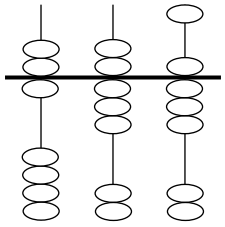
   (d) 110

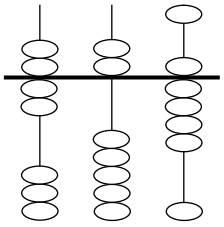
   (e) 110

   (f) 1665

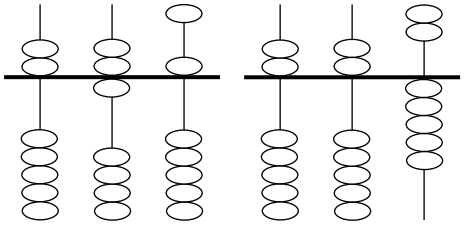
2. Input each number into your abacus so that as few beads as possible are raised.

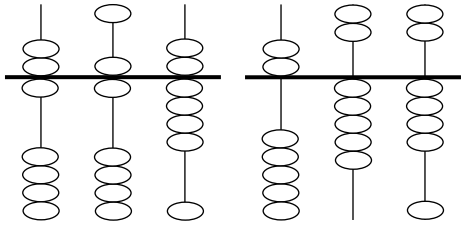
   (a) 26 

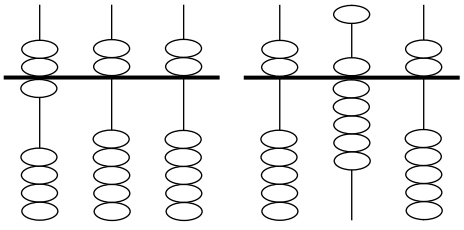
   (b) 138 

   (c) 209 

3. Represent each number in at least two different ways. (Solutions may vary)

   (a) 15 

   (c) 164 

   (b) 100 

4. Solve the addition. Only write down the answer!

   (a) 105 (c) 502 (e) 1001

   (b) 101 (d) 507 (f) 8532

5. Solve the Subtraction. Only write the answer!

   (a) 34 (c) 91 (e) 291

   (b) 82 (d) 498 (f) 2525

6. Solve the following multiplication problems on your abacus. Only write the answer!

   (a) 64 (c) 804 (e) 9498

   (b) 364 (d) 2529 (f) 8696

7. What is the product? Don't write down any steps.

   8064

8. CHALLENGE 1. Don't write down any steps.

   1234

9. CHALLENGE 2. Evaluate all the multiplication parts first and *write down your answers*, then do the addition and subtraction in between.

   973 less 210 less 512 add 416 less 666 = 1