Math 4a. Homework 2.

1. Rewrite the following expression without parenthesis, find the value of the expressions doing calculations with and without parenthesis.

   Example:
   $5 \cdot (4 + 3) = 5 \cdot 4 + 5 \cdot 3 = 20 + 15 = 35$
   $5 \cdot (4 + 3) = 5 \cdot 7 = 35$

   $a.\quad 7 \cdot (10 + 5);$ $\quad b.\quad 3 \cdot (25 - 5);$ $\quad c.\quad (2 + 7) \cdot 5;$

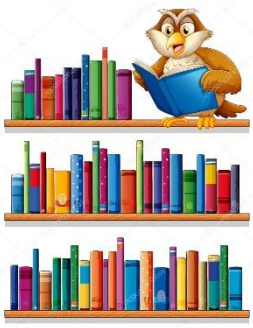
2. Evaluate (what is the best way to compute it)?

   a. $(972 + 379) - 972;$
   b. $(382 + 417) - 416;$
   c. $851 - (831 + 7);$
   d. $134 - 98 - 2;$
   e. $(538 + 245) - 245;$
   f. $(725 + 158) - 625;$
   g. $276 - (18 + 176);$
   h. $580 - 79 - 21;$

3. Evaluate (what is the best way to compute it? Hint: use the distributive and/or commutative properties):

   $a.\ 23 \times 15 + 15 \times 77;$ $\quad b.\ 79 \times 21 - 69 \times 21;$ $\quad c.\ 340 \times 7 + 16 \times 70;$
   $d.\ 250 \times 61 - 25 \times 390;$ $\quad e.\ 67 \times 58 + 33 \times 58;$ $\quad f.\ 55 \times 682 - 45 \times 682$
   $g.\ 26 \cdot 25 - 25 \cdot 24 + 24 \cdot 23 - 23 \cdot 22 + 22 \cdot 21 - 21 \cdot 20 + 20 \cdot 19 - 19 \cdot 18 + 18 \cdot 17 - 17 \cdot 16 + 16 \cdot 15 - 15 \cdot 14;$

4. On the first shelf there are 5 more books than on the second shelf and 5 less than on the third shelf. There are 105 books altogether. How many books are there on each shelf?



5. Andrew is preparing for the Ironman competition. To do this, he swims for 37 minutes every day for 256 days, and also runs for 63 minutes every day for 256 days. How many minutes does he spend doing sports?

6. The table in the picture should be filled in with the digits 1, 2, 3, 4, and 5 in a way that no digit can be put more than once in any row, column or diagonal. What digit should be in the middle cell?

3	4			5
2				
		?		
				4

7. It takes two minutes to fry a hamburger on one side. Two hamburgers can be placed in a frying pan. What is the shortest time it takes to fry three hamburgers on both sides?