

## Math Awareness Week Competition 2008 Examination for 3rd-4th Grades

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**DIRECTIONS:** [40 Minutes - 5 Questions] Start each new problem on a separate page.  
**Show your work!** Answers must be exact. You are allowed to use a calculator.  
You are not allowed to borrow or interchange calculators during the test.

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1. In the next line insert "+" signs between the numbers as many times as you want so that the result is a correct equality

$$987654321 = 90.$$

Example:  $9 + 8 + 7 + 65 + 4 + 3 + 21 = 117.$

2. How can we put 45 rabbits in 9 cells, so that there are different number of rabbits in each cell and none of the cells is empty?
3. A group of workers had agreed on a very strange payment schedule. Each of them would get \$100 for every day that they had worked, but for every day they did not work will have to return \$25. After 30 days they realised they did not earn any money. How many days the workers did not work?
4. A snail has fallen in a 10 feet deep hole. It started climbing up - every day it would climb 3 feet up but then it would fall 2 feet down while sleeping during the night. After how many days will the snail climb out of the hole?
5. There are 3 kids in a family-Anna, Peter and Maria. Anna can clean the house for 1 hour, Peter can do the same job for 3 hours and Maria needs 6 hours. How much time do they need to work to finish the same cleaning if they do it together?