**AP Computer Science - Brute Force Problems**

Directions – For each of the following problems, use Brute Force strategies to calculate the answer. Create a Java class with the underlined name that solves correctly the problem posed.

**Problem # 1 – TwoDigitNumber**

There is a two digit number that is 9 times the sum of its digits. What is this number?

**Problem # 2 – PattyAndTerry**

Patty is 3 times as old as her brother, Terry. In 10 years, the sum of their ages will be 36. How old are they now?

**Problem # 3 – ThreeDigitNumber**

I am a three digit number. My tens digit is five more than my ones digit. My hundreds digit is eight less than my tens digit. What number am I?

**Problem # 4 – NumberProduct**

What is the product of all positive integers less than or equal to 12?

**Problem # 5 – Grandpa**

Grandpa was feeling generous, so he gave $100 to his five grandchildren. Starting with the youngest, each got $2.00 more than the next younger one. In other words, the youngest got one sum, the next got $2.00 more, and so on. How much did the youngest grandchild get?

**Problem # 6 – ThreeSons**

There is a lady with 3 sons. None of them are twins. None of them are less than 2 years or more than 8 years in age of one another. The product of their ages is 36. How old are the three sons?

**Problem # 7 – TeacherBoat**

Four teachers bought an old boat for $60. The first teacher paid one-half of the sum of the amounts paid by the other teachers. The second teacher paid one-third of the sum of the amounts paid by the other teachers. The third teacher paid one-fourth of the sum of the amounts paid by the other teachers. How much did the fourth teacher pay?

**Problem # 8 – AnimalPurchase**

Your objective is to buy exactly 100 farm animals with exactly 100 dollars. You must buy at least 1 of each animal. Costs: Cows: $10 each Pigs: $ 3 each Chickens: $0.50 each

How many of each animal do you buy?

**Problem # 9 - IdenticalSix**

Find a 5 digit number, as big as possible, that when you multiply it by a single digit number, you get a six digit number, in which all digits are identical.

**Problem # 10 - DaycareCenter**

At the local daycare center, the teacher brought in some puppies. There were 20 more children than puppies. In the corner of the room, within the ant's nest, there were exactly 10 times as many ants as children. In total, including the teacher, the children, the puppies and the ants, there were 1440 legs in the room. How many children attended?