

Name: _____

CIS 351 Sample AL5 Problem

31 October 2025

AL5: Read Assembly

Describe in common English what the following functions do.

(a) **mysteryFunction1:**
 slt \$t0, \$a0, \$a1
 slt \$t1, \$a1, \$a2
 and \$v0, \$t0, \$t1
 jr \$ra

(b) Describe in common English what the following function does. Hint: It takes two integer parameters.
 sra stands for “shift right arithmetic”. It moves all the bits in the register to the right the specified amount.

```
mysteryFunction2:  
add $v0, $a0, $a1  
sra $v0, $v0, 1  
jr $ra
```

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CIS 351 Sample AL5 Problem Solutions

Fri 31st Oct, 2025

AL5: Read Assembly

Describe in common English what the following functions do.

(a) **mysteryFunction1:**
 slt \$t0, \$a0, \$a1
 slt \$t1, \$a1, \$a2
 and \$v0, \$t0, \$t1
 jr \$ra

It returns whether the parameters are in strictly increasing order.

(b) Describe in common English what the following function does. Hint: It takes two integer parameters. **sra** stands for “shift right arithmetic”. It moves all the bits in the register to the right the specified amount.

mysteryFunction2:
add \$v0, \$a0, \$a1
sra \$v0, \$v0, 1
jr \$ra

It returns the average of the two numbers.