CMPS-224 Quiz-9 name _____
Clearly indicate your answers please.

1. Write two statements in x86 assembly, using only push and pop, that will move the value 0x1 to register rax.

**push 0x1**
**pop rax**

2. x86 assemblers can call external functions such as write() with the syscall command. If write is an atomic function, it would mean that...

A. it is an intrinsic function on the processor.
B. it writes directly to memory.
**C..it will complete without interruption.**
D. it runs outside the processor pipeline.

3. If you are calling a function in your x86 assembly program that accepts one argument, what register should you store the argument value in?

A. rax
**B..rdi**
C. rsi
D. rsp

4. Your x86 function returns one value to the caller. What register should you store the return value in?

**A..rax**
B. rbx
C. rbp
D. rsp

5. The ARM architecture is

A. another name for the MIPS architecture.
B. a CISC architecture
**C..a RISC architecture**
D. used mostly on super computers

6. What is the only x86-64 instruction that takes a full 64-bit immediate?

A. xor
B. stosb
C. cmp
**D..mov**

7. What does this instruction do?

**lea rsi, [rbp]**

A. copies into rsi the value at address rbp
**B..copies the value of rbp into rsi**
C. compares rsi with the address of rbp
D. loads into rbp the value in rsi

8. What does the following assembly code do?

**section .rodata**
**display db "Go Roadrunners",10,0**

A. creates a read-only display named db.
**B..defines a string of length 15.**
C. displays the words "Go Roadrunners" and goes to a new line.
D. loads a string into the heap section of the executable.

9. When calling a function that requires eight arguments, where are the seventh and eighth argument values stored?

**on the stack**

10. Write x86 statements that will cause a program to branch to label **top** if the value in eax is 25, otherwise branch to **bottom**.

write your statements here...

**cmp eax, 25**
**je top**
**jmp bottom**

**top:**

**bottom:**