Open Book/Notes quiz

**1)** **(3 points)** Which direction does the stack on the MSP430 grow.

1. **Down in memory**
2. Up in memory

**2) (3 points)** The SP register, register 2, points to:

1. **TOS and Valid data**
2. TOS and An empty location

**3) (3 points)** The instruction to add an item to the stack is the \_\_\_\_ **PUSH** \_\_\_\_\_ instruction.

**4) (3 points)** The instruction to remove an item from the stack is the \_\_\_ **POP** \_\_\_\_\_ instruction.

**5) (8 points)** What will the following instruction do? Be sure to state how many bits are moved, what is the source of those bits, the destination, and how is the SP register affected.

pop.w R4

Bits moved? **16**

Source? **The stack**

Destination? **R4**

SP register? **SP = SP+2**