Translations: Dynamic Relocation with Base and Bounds

Assume that a process's address space is located in one contiguous block in physical memory, and that the `bounds` register indicates the size of the AS, not the physical address of the end of the AS. The address space is 16KB in size, and physical memory is 64KB in size.

```
base register:  8200
bounds register:  5000
```

For each virtual address,
(1) What is the corresponding physical address?
(2) Is this a valid physical address for this process?

1. Virtual Address 201

2. Virtual Address 11204

3. Virtual Address 6436

4. Virtual Address 1841

5. Virtual Address 2272

Translations: Segmentation

Assume that a process's address space is located in two segments. The address space is 16KB in size, and physical memory is 64KB in size.

Segment 0
`base register:  25000`
`bounds register:  4000`
grows positive

Segment 1
`base register:  49000`
`bounds register:  4500`
grows negative

For each virtual address (now listed in decimal and binary),
(1) In which segment is this virtual address located?
(2) What is the corresponding physical address?
(3) Is this a valid physical address for this segment?

1. Virtual Address 201 (00 0000 1100 1001)

2. Virtual Address 11204 (10 1011 1100 0100)

3. Virtual Address 14749 (11 10001 1001 1101)

4. Virtual Address 1841 (00 0111 0011 0001)

5. Virtual Address 6436 (01 10010 0100 0100)