CS16, 10W, UCSB—H12: (Addresses, Pointers, Arrays, Etter, Section 6.2) Total Points: 50 ([printable PDF](#))

Available online at: http://www.cs.ucsb.edu/~pconrad/cs16/10W/homework/H12

Accepted: **on paper, in Lecture (11am Tuesday Feb 16th)**

Late Policy: No email submission allowed—and don't "slip it under my door". If you need to make it up, you must do so during office hours, or make an appointment to see me, and you must request this appointment within 48 hours of when the assignment was originally due.

Personal Day/Sick Day policy: Everyone is permitted one "personal day/sick day" when you get to make up a missed homework assignment for free during office hours or via appointment. After that, you may not make up the homework assignment—you can only earn back the points through extra credit opportunities.   (For more details, see the [syllabus](#) and the [homework policy](#))

Name: (3 pts)_____ UMail address (4 pts) _____@umail.ucsb.edu

Lab Section (3 pts) Circle one: 3pm   4pm   5pm   unknown

<div align="center">

This assignment is due **IN Lecture on Tuesday.**
It may ONLY be turned in during Lecture on Tuesday.

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Name of your pair programming partner(s), if you work together:

Read Section 6.1and 6.2 in your Etter textbook—and review your lecture notes from Thursday Feb 4.

In addition, keep in mind that in the textbook, Etter uses %u as the format specifier for pointers, while in lecture I tend to use %p instead.

The difference is that %u prints the address value as an "unsigned integer", in base 10, while %p prints the address value in hexadecimal.

Then answer the questions on the back of this sheet.

On p. 294, there are four practice problems—the answers to those problems can be found on p. 418 in your textbook.

Work through those problems for practice and then check your answers.

You will find that one of the answers in the book is incorrect.

To determine which one, you can use Ch:

```
-bash-3.2$ ch
Ch
Professional edition, version 6.1.0.13751
(C) Copyright 2001-2009 SoftIntegration, Inc.
http://www.softintegration.com
/cs/faculty/pconrad> int g[]={2,4,5,8,10,32,78};
/cs/faculty/pconrad> *g
2
/cs/faculty/pconrad> *(g+1)
4
/cs/faculty/pconrad>
```

etc.

(5 pts) Determine which of the answers in the book is incorrect and indicate that here:

Then, turn over this sheet and work a similar problem—of course, the answers to that problem are NOT in the book.

Please turn over for more problems

Continued from other side

1. (5 pts) Assume that an array h is defined with the following statement:

```
int h[] = {13,42,26,98,45,11,19};
int *ptr1 = &h[1];
```

Give a diagram of memory allocation similar to the one shown in the answer on p. 418 to the practice questions.

	value	offset
h[0]		
h[1]		
h[2]		
h[3]		
h[4]		
h[5]		
h[6]		

2. Continuing with the same definitions of h and ptr1 give the value of each of these expressions:

    a. (5 pts) `*h`

    b. (5 pts) `*(h+1)`

    c. (5 pts) `*h + 1`

    d. (5 pts) `*h + 2`

    e. (5 pts) `*ptr1`

    f. (5 pts) `*(ptr1 + 1)`

End of H12