

	A	B	C	D
1	Assignment 1			
2		<i>a(0x100)</i>		0x100
3		3		3
4		<i>b(0x104)</i>		0x104
5		0x100		3
6				0x100
7	No errors			
8	Assignment 2			
9		<i>x(0x100)</i>		100
10		100		1,2
11		<i>z(0x104)</i>		400
12		50->100->200->400		0x104
13		<i>y(0x108)</i>		400
14		20,0->1,2		0x114
15		<i>ch(0x109)</i>		0x100
16		Z		100
17		<i>chp(0x110)</i>		0x118
18		0x109		0x108
19		<i>ip1(0x114)</i>		1,2
20		0x100->0x104		0x122
21		<i>ip2(0x118)</i>		Error
22		0x104-> 0x100		z
23		<i>fp(0x122)</i>		0x110
24		0x108		
25	There's 1 error	char's address not displayed		

	A	B	C	D	E	F	G	H
22		0x104-> 0x100		z				
23		fp(0x122)		0x110				
24		0x108						
25	There's 1 error	char's address not displayed						
26	Assignment 3							
27		STACK				Assignment 3	HEAP	
28		a(0x100)		2				0x1000
29		0x1000		2				2
30		b(0x104)						0x2000
31		0x2000 -> 0x1000						
32								
33		No errors						
34	Assignment4							
35		STACK					HEAP	
36		a(0x100)						0x1000
37		3		3				5
38		p(0x104)		5				
39		0x100->0x1000						
40								
41		1 problem is that we have not deleted p to return the memory which we borrowed						
42								
45	Assignment 5							
46		STACK					HEAP	
47		v(0x100)						
48			8	*p	50			
49		r(0x104)		q	8			
50		0x116		*r	8			
51		s(0x108)		v	8			
52		0x1000		*s	50			
53		p(0x112)						0x1000
54		0x116-> 0x1000						50
55		q(0x116)						
56		100-> 20-> 30->8						
57								
58								
59	Assignment 6							
60		STACK					HEAP	
61		p(0x100)						
62		0x108->0x112->0x116->0x124->0x120		*p	12			
63		q(0x104)		*q	11			
64		0x108		v	11			
65		v(0x108)		nom	12			
66		12->10->11			13			
67		nom(0x112)			12			
68		0x112	12		10			
69		0x116	13		16			
70		0x120	12					
71		0x124	10					
72		0x128	16					
73								

Assignment 7:

B. Error: suspicious pointer conversation

Because we haven't assigned pointer x for any address, so we can't use `*x = 100` to change the value of the address to 100.

Assignment 9: (8)

D.ce

`*s = "peace"`, when we print `s++ +3` means we print s from the position 3th which is "ce"

Assignment 13: (9)

a)*

Assignment 14: (10)

a)x is a pointer to a string, y is a string

Assignment 15: (11)

d) point to a type

Because a,b,c are correct.

Assignment 16: (12)

c) `int i; double* dp = &i;`

pointer dp and i must be the same type.

Assignment 17: (13)

b) p now points to b

Assignment 19: (14)

a)ABCDEFGHIJ

as for ASCII, `*(arr + 0) = arr[0] = 65` which is A, `*(arr + 1) = arr[1] = 66` which is B and so on.

Assignment 20: (15)

a)fg

ptr = Str = "abcdefg" so when ptr += 5, it will count from the position 5th of ptr.

Assignment 21: (16)

D.All of them

Assignment 24: (17)

C. The new operator

Assignment 25: (18)

B. Indirection

Assignment 27: (19)

A.Pointer contains an address of a variable

Assignment 28: (20)

C.3

0,NULL,address

Assignment 29: (21)

C.Address operator

Assignment 30: (22)

c.129,a

cho += a means cho += 32 means ch = 'A' = 65 + 32 = 97 = 'a' (as cho is a reference variable to ch)

*ptr += ch means a += 'a' = 97 means a = 97 + 32 = 129 (as *ptr returns the value of a)

Assignment 31: (23)

d.Compile error

ptr has been defined as a constant pointer so the value of it (its address) and its value can't be changed. Therefore (*ptr)++ and ptr = &j made it error.

Assignment 33: (24)

c.14

$*arr + 10 = arr[0] + 10 = 4 + 10 = 14$

Assignment 34: (25)

c. compile error

ra declared as reference but not initialized

Assignment 35: (26)

2 will be the output because $ptr = a$ means $ptr = a[0]$ so $*(ptr + 1) = a[0+1] = a[1] = 2$.

Assignment 36: (27)

15 will be the output because $*ptr = \&a$ so $*ptr = *ptr * 3 = a * 3 = 5 * 3 = 15$

Assignment 37: (28)

222 will be the output because $(l * *j * l + *j) = 6 * 6 * 6 + 6 = 222$ ($*j = \&l = 6$).

Assignment 38: (29)

$x = 20, \&x = 500, y = \&x = 500;$

$z = y = 500, *y++ = *(y+1) = 504$ (next address to x's address) ;

$*z++ = *(z+1) = 504; x++ = 21.$

So the output will be: 21, 504, 504

Assignment 41: (30)

b) Runtime error

because ptr is a wild pointer and may point anywhere in memory so we can't $*ptr = 5$.