1
1.1

3
It returns the value stored by the reference to the address.

1.2

The int itself is not a pointer and so the asterix should be on the p1 variable.

Int *p1, *p2

1.3

a:1 + b: 3 = 8
a:1 + b: 3 = 8

1.4
a)

Point1

stack

Address	Variable	Type	Value
1000	a	int	7
1001	b	int	2
1002	intptr1	pointer	1000
1003	intptr2	pointer	1001

Heap is empty at point1

Point2

stack

Address	Variable	Type	Value
1000	a	int	7
1001	b	int	2
1002			
1003	intptr2	pointer	1001

Heap

Address	Variable	Type	Value
5000	intptr1	pointer	
5001			

5002			
5003			

Point3
stack

Address	Variable	Type	Value
1000	a	int	7
1001	b	int	2
1002	intptr1	pointer	
1003	intptr2	pointer	1001
1004	d	double	4.5

Heap

Address	Variable	Type	Value
5000			
5001			
5002			
5003			

Point4
stack

Address	Variable	Type	Value
1000	a	int	7
1001	b	int	2
1002			
1003	intptr2	pointer	1002
1004	d	double	4.5

Heap

Address	Variable	Type	Value
5000	intptr1	pointer	null
5001			
5002			
5003			

b)

double average(int *x, int *y)

stack

Address	Variable	Type	Value
1000	a	int	7
1001	b	int	2
1002	intptr1	pointer	
1003	intptr2	pointer	1001
1004	d	double	4.5

Heap

Address	Variable	Type	Value
5000			
5001			
5002			
5003			

c)

Heap

Address	Variable	Type	Value
5000	dptr	pointer	
5001			
5002			
5003			

Using new() allocates memory but since there is no garbage collector, the pointer should be deleted. Not doing so will result in using up the memory.