Trace (p. 1)

Statement	b	y	z	c
Initial values	?	?	?	?
1. b = 15.0;	15.0			
2. y = 7.5		7.5		
3. z = avg3(b, -3.6, y);			6.3	
4. c = avg3(9, y, 2+z);				8.2666
5. print z+c				

1

Trace (p. 2)

avg3(b, -3.6, y);

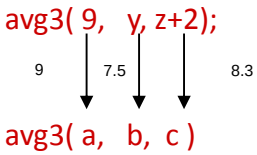
15.0 -3.6 7.5

avg3(a, b, c)

Statement	a	b	c	sum	avg
Initial values	15.0	-3.6	7.5		
1. sum = a + b + c;				18.9	
2. avg = sum / 3.0;					6.3

2

Trace (p. 3)



Statement	a	b	c	sum	avg
Initial values	9	7.5	8.3		
1. `sum = a + b + c;`				24.8	
2. `avg = sum / 3.0;`					8.26666

3

Trace (p. 1)

Statement	i	a	Output
Initial values	?	?	
1. `i = 0`	0	?	
2. `a = int[] {2,4,6,8,10,12}`		{2,4,6,8,10,12}	
3. `while ( i <= 2 )` true			
4. `arraySwap( a, i, 5-i )` see page 3		{12,4,6,8,10,2}	
5. `i = i + 1`	1		
3. `while ( i <= 2 )` true			
4. `arraySwap( a, i, 5-i )` see page 4		{12,10,6,8,4,2}	
5. `i = i + 1`	2		
3. `while ( i <= 2 )` true			
4. `arraySwap( a, i, 5-i )` see page 5		{12,10,8,6,4,2}	
5. `i = i + 1`			
3. `while ( i <= 2 )` false	3		

4

Trace (p. 2)

Statement	i	a	output
(most recent values from page 1)	3	{12,10,8,6,4,2}	
6. `for ( i = 0; i <= 5; i = i + 1 )`	0		
7. `System.out.println( "A["+i+"] = "+a[i] )`			A[0] = 12
6. `for ( i = 0; i <= 5; i = i + 1 )` true	1		
7. `System.out.println( "A["+i+"] = "+a[i] )`			A[1] = 10
6. `for ( i = 0; i <= 5; i = i + 1 )` true	2		
7. `System.out.println( "A["+i+"] = "+a[i] )`			A[2] = 8
6. `for ( i = 0; i <= 5; i = i + 1 )` true	3		
7. `System.out.println( "A["+i+"] = "+a[i] )`			A[3] = 6
6. `for ( i = 0; i <= 5; i = i + 1 )` true	4		
7. `System.out.println( "A["+i+"] = "+a[i] )`			A[4] = 4
6. `for ( i = 0; i <= 5; i = i + 1 )` true	5		
7. `System.out.println( "A["+i+"] = "+a[i] )`			A[5] = 2
6. `for ( i = 0; i <= 5; i = i + 1 )` false	6		

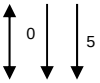
5

Trace (p. 3)

arraySwap(a, i, 5-i)

{12,4,6,8,10,2}

{2,4,6,8,10,12}



arraySwap(x, i, j)

Statement	x	i	j	temp	a (from page 1)
Initial values		0	5		{2,4,6,8,10,12}
1. `temp = x[i]`				2	
2. `x[i] = x[j]`					{12,4,6,8,10,12}
3. `x[j] = temp`					{12,4,6,8,10,2}

6

Trace (p. 4)

arraySwap(a, i, 5-i)

{12,10,6,8,4,2}

{12,4,6,8,10,2}

1 4

arraySwap(x, i, j)

Statement	x	i	j	temp	a (from page 1)
Initial values		1	4		{12,4,6,8,10,2}
1. temp = x[i]				4	
2. x[i] = x[j]					{12,10,6,8,10,2}
3. x[j] = temp					{12,10,6,8,4,2}

7

Trace (p. 5)

arraySwap(a, i, 5-i)

{12,10,8,6,4,2}

{12,10,6,8,4,2}

2 3

arraySwap(x, i, j)

Statement	x	i	j	temp	a (from page 1)
Initial values		2	3		{12,10,6,8,4,2}
1. temp = x[i]				6	
2. x[i] = x[j]					{12,10,8,8,4,2}
3. x[j] = temp					{12,10,8,6,4,2}

8