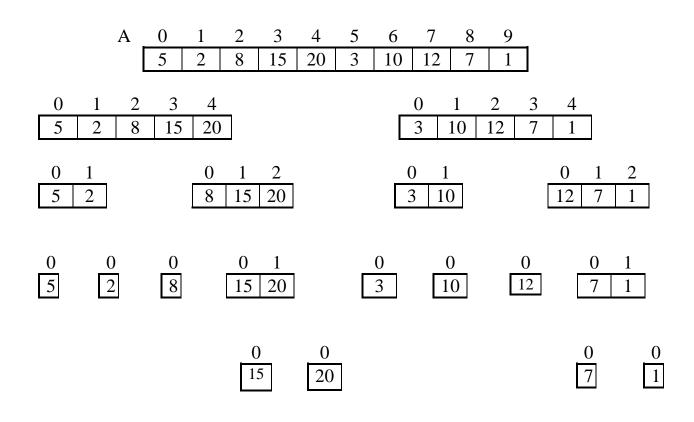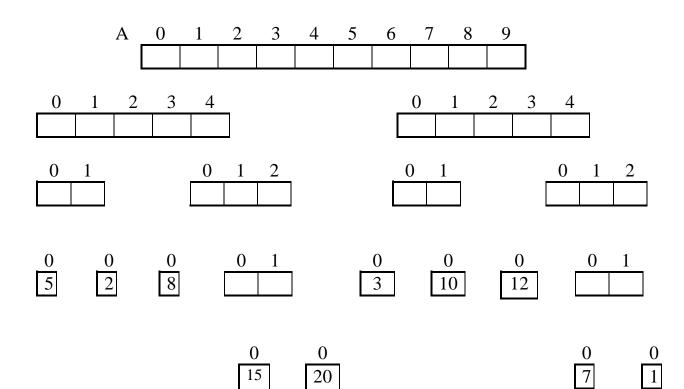**Merge Sort Practice**

Show the complete recursive breakdown to single elements of the array shown below.
When selecting a division point, use the following code:

```
int mid = n / 2;
int[] left = new int[mid];
int[] right = new int[n - mid];
```

A	0	1	2	3	4	5	6	7	8	9
	2	7	14	80	5	20	35	6	55	8

Given the following breakdown of an array under the mergesort algorithm, show how the array is built back up into a sorted array.

	A	0	1	2	3	4	5	6	7	8	9
		5	2	8	15	20	3	10	12	7	1

0	1	2	3	4
5	2	8	15	20

0	1	2	3	4
3	10	12	7	1

0	1
5	2

0	1	2
8	15	20

0	1
3	10

0	1	2
12	7	1

0
5

0
2

0
8

0	1
15	20

0
3

0
10

0
12

0	1
7	1

0
15

0
20

0
7

0
1

	A	0	1	2	3	4	5	6	7	8	9

0	1	2	3	4

0	1	2	3	4

0	1

0	1	2

0	1

0	1	2

0
5

0
2

0
8

0	1

0
3

0
10

0
12

0	1

0
15

0
20

0
7

0
1