Quiz 12, Problem 3

The following is a stemplot of 12 exam scores:
(The stem is the tens place and the leaf is the ones place.)

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6 | 8
7 | 66
8 | 0488
9 | 22666
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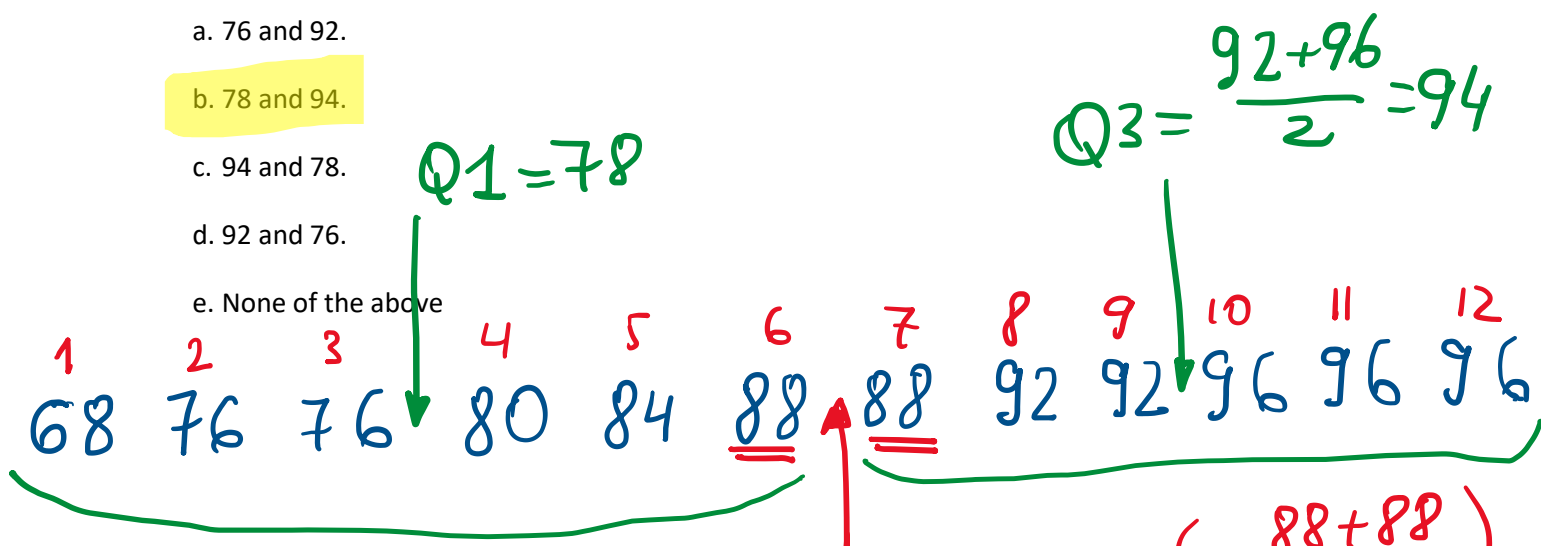3. The first and third quartiles are, respectively,

a. 76 and 92.

b. 78 and 94.

c. 94 and 78.

d. 92 and 76.

e. None of the above

$$Q1 = 78$$

$$Q3 = \frac{92+96}{2} = 94$$

1	2	3	4	5	6	7	8	9	10	11	12
68	76	76	80	84	88	88	92	92	96	96	96

Q1 is the median of these six numbers. Hence

$$\frac{76+80}{2} = 78$$

$$\text{median} = 88 \left(= \frac{88+88}{2} \right)$$

but it is not any of the underlined 88's

❗ When calculating the median (and later quartiles too) pay attention to the LOCATION first and only then to the VALUE.