- 1. Select all correct answers. Completeness property of a tree refers to
 - a. Every tree level is completely filled
 - b. Every tree level except the last is completely filled
 - c. Nodes on bottom level are as far left as possible
 - d. Nodes on the bottom level are as far right as possible
 - e. Every element in the tree is greater than its parent
 - f. Every element in the tree is smaller than its parent
- 2. Draw a min-heap in binary tree representation that contains the integers [9, 5, 2, 1, 2, 2].

3. Draw a min-heap in binary tree representation that contains the integers [2, 6, 12, 15, 20, 17].

4. The array [2, 6, 12, 15, 20, 17] is a min-heap in array representation. What will the heap by (in array form) after removing the minimum element (poll operation)?

2. Consider the following four trees, which we'll denote TL (top left), TR (top right), BL (bottom left) and BR (bottom right).

For each of TL, TR, BL, BR, indicate whether it is a (min) heap. For any of the four that are not heaps, explain why.

