## Practice - Depth-first, Breadth-first search

Consider the following graph. Assume the nodes are stored in numerical order.


1. Give the depth-first search ordering starting at one.

| 1 | 3 | 2 | 4 | 5 | 6 | 7 | 9 | 10 | 8 | 16 | 17 | 18 | 11 | 12 | 14 | 13 | 15 | 19 | 20 | 21 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

2. Give the breadth-first search ordering starting at one.

| 1 | 3 | 4 | 2 | 13 | 5 | 11 | 14 | 15 | 6 | 7 | 12 | 9 | 17 | 18 | 10 | 8 | 16 | 19 | 20 | 21 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Depth-first spanning forest with only the tree (primary) edges.


